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CORPORATION OF GLASGOW

REPORT

OF THE

Medical Officer of Health
City of Glasgow

1938

ORDERED BY THE COMMITTEE ON HEALTH TO BE PRINTED



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Corporation Printing Department

PREFACE

It is customary to preface the Annual Report by a brief reference to some of its principal contents. These may be grouped under two main heads, (a) population and vital statistics, and (b) the health services administered by the Department.

Population.—The population of the City is estimated by the Registrar-General at 1,127,825 persons. On the basis of this calculation the population has increased by 7,962 persons since last year. It may be explained that the factors on which intercensal estimates are based are much more uncertain than they used to be; consequently, the true rate of growth will not be accurately known until the 1941 census has been taken. An extension of the City boundaries was effected on 26th May, 1938, whereby 9,681 acres were added to the size of the City and 5,984 persons to its population.

Persons per House.—The population of the City is housed in 280,561 houses, equivalent to 4 persons per house. This figure has, for many years been slowly declining, directly due to the fall in the birth-rate and the fall in the death-rate. For instance, the fall in the birth-rate increases the number of small families, while the fall in the death-rate and the lengthened span of life has tended to increase the number of older people who occupy houses after their children have grown up and left the parental roof.

Empty Houses.—The number of unoccupied houses was 745, of which only 369, or 49.5 per cent., were of three apartments or under. This low figure indicates continued pressure on accommodation in the smaller houses of the City. Indeed, lack of this type of housing accommodation has led to the rapid growth of sub-letting; it is estimated that there are some 2,000 sub-let houses, many of them of undesirable type, with the minimum of sanitary appliances.

General Death-rate.—The general health of the City, as measured by the usual vital statistics, underwent considerable improvement. There were 15,016 deaths in 1938 as compared with 16,379 in 1937,

a drop of 1,363 deaths. The general death-rate of 13.3 per thousand of the population was the lowest yet recorded. The following are the rates for the preceding ten years:—

1929	...	...	16.3	1934	...	...	13.7
1930	...	...	14.2	1935	...	...	13.7
1931	...	...	14.2	1936	...	...	14.7
1932	...	...	14.7	1937	...	...	14.6
1933	...	...	13.4	1938	...	...	13.3

Causes of Lessened Mortality.—The causes of the lessened mortality are to be found mainly in those affections that normally give rise to fluctuations from year to year. There was, for instance, a decided fall in the deaths due to pneumonia and the respiratory diseases to a figure never before experienced, the rate representing a decrease of 25 per cent. as compared with the rates for recent years. Pneumonia and bronchitis together caused 522 fewer deaths, while deaths from influenza were less by 410; thus, there were nearly 1,000 fewer deaths from the respiratory affections. Deaths from heart disease were less numerous. There was also a saving of life among young children, due to diarrhoeal conditions.

Infant Mortality.—The year 1938 was mild though wet, and the weather conditions were favourable to young life and to that of older persons, leading to a lesser incidence and severity of pneumonia and other diseases of the lungs. Deaths of infants under one year numbered 1,919, or 394 fewer than those that occurred in 1937. The infant mortality rate was 87 per thousand births as compared with 104 for the preceding year. This is the lowest figure yet recorded, and the reduction was mostly due to a fall in the mortality from infections of infancy and in the immaturity group of diseases which cause death shortly after birth.

Birth-rate.—The births numbered 21,979, equivalent to a birth-rate of 19.5, compared with the respective figures of 22,176 and 19.8 in 1937.

Causes of Death.—The principal causes of death, apart from fluctuations due to epidemics, affect the population mostly at the extremes of life. Among older people deaths from heart disease were less numerous. On the other hand, affections of the lungs, malignant disease, and diseases of the nervous system were much the same as in 1937. As regards the infectious diseases, there was

a complete absence of influenza during the year, whereas in 1937 this disease caused 496 deaths among the young and the old. Enteric fever accounted for 57 cases and 5 deaths. Among the infectious diseases of children, whooping-cough was responsible for 88 deaths, diphtheria for 132 deaths, scarlet fever for 29 deaths, and measles for 257 deaths. A further decline was experienced in the incidence of diarrhoeal diseases in children under two years of age.

The death-rate from pulmonary tuberculosis was 0.85 per thousand of the population. The general phthisis death-rate has moved little during the past ten years. The rate for non-pulmonary tuberculosis was 0.24 per thousand.

Summary.—The general death-rate was the lowest yet recorded, due mainly to the fact that deaths from pneumonia and bronchitis were fewer by 25 per cent. than those that occurred in 1937, a record experience for the City. The infant mortality was also the lowest recorded. The infectious diseases call for no special comment. Scarlet fever was extremely mild, although diphtheria was considerably more severe. The epidemic of measles was of average severity. There was a slight increase in maternal mortality.

These figures are records of disease. On the side of positive health, the physical condition of school children reached a new high standard.

HOSPITAL PROVISION.

Progress of Reorganisation.—Reorganisation of the general hospital accommodation continues. At the Southern General Hospital the X-ray department has been almost completely equipped. The outdoor clinic provided at the hospital gate is being used for a variety of purposes, such as dentistry, ante-natal consultations, and the treatment of skin disease; it is also used for the outdoor medical services of the area. The throat and nose theatre has been completed and also the dietetic kitchen, while a new garage for motor ambulances has been provided. Reconstruction of the centre block is proceeding step by step, with the minimum disturbance to patients. At Stobhill Hospital additions have been made to the equipment of the electro-medical department, while a new bio-chemical laboratory is under construction. At the infectious disease hospitals no change has been made in the con-

struction or administration. When the X-ray department has been completed at Belvidere all these hospitals will have adequate radiological facilities. Several additions to the resident and visiting medical staffs of the hospitals generally were under consideration at the close of the year.

Reports by the Superintendents on the work of the hospitals are given in a special section where reference is made to the treatment of certain infections by the sulphanilamide group of remedies. Increasing use is being made of Robroyston Hospital for chest surgery and the treatment of cases of special difficulty including genito-urinary tuberculosis. The report on Mearnskirk Hospital shows that an increasing number of orthopædic cases in children is being admitted in co-operation with the Education Health Service. The total number of beds in the infectious disease hospitals, including tuberculosis and orthopædics, is 3,038, which is equivalent to 2.7 beds per thousand of the population.

General Hospitals of the City.—The number of general hospital beds available in the City, including voluntary and local authority, is approximately 6,043 or 5.3 per 1,000 of the population, but in the case of the voluntary hospitals a considerable proportion of the beds are occupied by patients from beyond the City boundary.

The three large voluntary general hospitals, Western Infirmary, Royal Infirmary and Victoria Infirmary, have a total of 1,976 beds. Other hospitals of a more specialised kind, such as the Royal Hospital for Sick Children, the Royal Maternity Hospital, the Samaritan (Women's) Hospital, the Cancer Hospital, the Eye Infirmary, the Ear, Throat and Nose Hospital, and others of smaller size bring up to 3,300 the total of voluntary hospital beds.

Despite the fairly liberal provision of hospital beds, there still remains a definite shortage of accommodation. As regards infectious diseases, the new Cowglen Hospital when it is completed will relieve the pressure on the fever hospitals. Deficiency of general hospital beds has become increasingly manifest, and the Corporation has approved of the provision of an additional hospital to accommodate from 800 to 1,000 beds. The reasons for reaching this decision may be stated briefly as follows:—

(1) There is a definite shortage of hospital accommodation. A degree of overcrowding is constant in the general hospitals and is worst in winter. Recently waiting lists have had to be set up during the winter months.

(2) The voluntary hospitals are also overfull and have waiting lists.

(3) The increasing demand on hospital accommodation is shown as follows:—In 1931 the number of admissions to the general hospitals was 22,142; in 1937, 30,384 patients were admitted.

(4) This growing demand on accommodation entails a considerable degree of overcrowding in excess of the number of patients permissible on the generally accepted minimum standard of 8 feet between bed centres, *i.e.*, 5 feet between the beds.

(5) Certain re-arrangements of, and additions to, accommodation at Stobhill and Southern General Hospitals have been approved or are in progress. These will, when completed, materially relieve congestion on the present basis of demand, but there will still remain a deficiency of hospital beds to meet the needs of the population and to cope with future requirements.

(6) A deficiency of hospital beds exists for certain purposes, such as (a) treatment of the more chronic long continued illnesses, especially in older people; (b) treatment of certain specialities, including diseases of the ear, throat and nose, some surgical conditions, maternity, and diseases of women; and (c) medical observation and diagnosis. The Maternity Services (Scotland) Act, 1937, is likely to cause an increased demand for the treatment of gynæcological conditions. It is probable also that additional beds will be required for the Cancer Service which the Government proposes to set up.

(7) The main problem, as regards hospital accommodation, centres round the more "chronic" case. This demand is a normal development due to the increased numbers of older persons in the population who are, by reason of age, more liable to sickness. At the same time, there are a number of illnesses which occur in younger persons and for which prolonged treatment under suitable conditions is necessary to prevent chronicity.

(8) In Barnhill Institution, 324 beds are occupied by chronic sick patients, the majority over sixty years of age, who require continuous medical care and nursing; there are also 168 beds occupied by infirm but mostly ambulant cases. At the date of the Report of 28th July, 1937, by Drs. Laidlaw and Mackay, there were actually in residence 262 hospital patients and 158 in the infirm wards.

(9) Reviewing the hospital problem as a whole, the main considerations would be (a) to overtake the deficiency of beds required for the population generally, as explained above, and (b) to make alternative provision for the 324 hospital beds in Barnhill in the event of this institution being given up for this purpose.

(10) It is difficult to state what the ultimate requirements for these two purposes will be, but it may be estimated provisionally that a new hospital should contain from 800 to 1,000 beds for both acute and chronic patients. The hospital would be so designed that both types of provision would be separately capable of extension, the sick persons to be accommodated therein being those requiring continuous medical care and nursing.

NOTE ON ACCOMMODATION IN THE CORPORATION GENERAL HOSPITALS.

The following notes have been prepared to show the manner in which the general hospitals are used, with special reference to the number of effective beds available for the reception and treatment of patients. In a review of hospital beds there are three sets of facts to be considered—(a) the standard accommodation for which the institution has been “licensed,” (b) the actual accommodation and the number of beds in use, (c) the number of beds that may be regarded as the normal or nett accommodation. These three sets of figures are explained in the following paragraphs.

Standard Accommodation.—The standard or licensed accommodation in the four general hospitals is stated at 3,738 beds, made up of 1,465 male adult beds, 1,553 female adult beds, and 720 cots for children. These beds are, for various reasons, not all available; the actual accommodation at present in use in the four hospitals is 3,356 beds, made up of 1,328 beds for male adult patients, 1,376 for female adults, and 652 cots. The exact distribution of these beds and the reasons why certain of them are not in use are given in a table in the Appendix (Table XXA). This figure of 3,356 beds includes those in hospital wards that are habitually overcrowded.

Accommodation on the Basis of 8-foot Bed Centres.—The pressure on hospital accommodation has prevented this reasonable standard from being attained, especially during the winter months. The medical wards in particular are chronically overcrowded; Table

XXB in the Appendix shows that the number of beds in the four general hospitals would be 2,806 if the 8-foot bed centre standard were applied.

The position thus is as follows:—the licensed accommodation is given as 3,738 beds; the actual accommodation for general hospital purposes is 3,356 beds. The nett accommodation on an 8-foot bed standard is 2,806 beds.

Grouping of Hospital Beds.—The following table shows the nett available accommodation in the four general hospitals, distributed according to the various groups into which wards are arranged for treatment and administrative purposes:—

Department.	Number of Beds.			
	Males.	Females.	Cots.	Total.
Medical	617	602	83	1,302
Surgical	269	154	27	450
Skin, Eye, and Ear, Nose and Throat ...	142	100	64	306
Mental and Encephalitis	262	189	5	456
Phthisis	38	—	1	39
Ante-Natal, Maternity and Gynaecological	—	331	134	465
Sick Children	—	—	144	144
Healthy Children	—	—	194	194
	<u>1,328</u>	<u>1,376</u>	<u>652</u>	<u>3,356</u>

This table indicates the broad functions of the general hospitals and the manner in which the accommodation is subdivided for general and special purposes. The sections of the Report dealing with hospitals explain the work in more detail. The pressure on the general medical beds has made it impossible to give due regard to the growing requirements of the several “specialties,” and it is difficult to hold the scales evenly between the demands made by this or that special service. It is this consideration, more than any other, that has led the Committee on Health to the conclusion that an additional hospital is required for the City.

The Report reviews the various branches of public health administered by the Department under the headings of Maternity and Child Welfare, Welfare of the Blind, Infectious Diseases, Venereal Diseases, the work of the Port Local Authority, Housing, the Bacteriological Laboratory, control of Food Supplies, Air Purification, General Sanitary Operations, including the reports of the

Divisional Sanitary Inspectors, the Fever and Tuberculosis Hospitals, the General Hospitals, the Outdoor Medical Services and Clinics, and the Service for Lunacy and Mental Deficiency. The reports of the Medical Superintendents of the various hospitals are incorporated. The Annual Report of the Education Health Service is issued separately, as it coincides with the school year, which terminates at the end of June.

In presenting this Report, I desire specially to acknowledge the services of Mr. William M'Kean, Assistant Secretary to the Department, who has, as usual, given much time and care to its preparation and arrangement, and, on the statistical side, the services of Mr. Ritchie and the clerical staff.

A. S. M. MACGREGOR,
Medical Officer of Health.

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REPORT

OF THE

Medical Officer of Health

FOR THE YEAR

1938

PART I

SECTION I.

POPULATION.

In the Report for last year reference was made to the difficulties of estimating the population of the City because of the uncertainty of the factors on which local estimates are usually made. In consequence, the figure issued by the Registrar General for Scotland has been adopted. Populations during inter-censal periods are usually estimated by means of a factor expressing the average number of persons per house, but this figure has altered so much in recent years that it has become unreliable. Until the 1921 census the number of persons per house averaged $4\frac{1}{2}$, but now the number of occupants would appear to be more nearly $3\frac{1}{2}$, a reduction approaching 25 per cent. It is this reduction, or, put in another way, the improvement in the standard of housing, that has caused so much dubiety as to what should be regarded as a reasonably accurate factor with which to multiply the 280,561 occupied houses in the City.

The figure published by the Registrar General as the estimate of the population at the middle of 1938 is 1,127,825 which is an increase of 7,962 over the estimate for the previous year, 1,119,863.

The boundaries of the City, however, were extended as from 15th May, 1938, and although the area annexed was considerable the population in it was comparatively small. Some of these areas were small because they represented parts of housing schemes which extended over the old City boundary. The larger areas of the added areas, such as those to the north of Knightswood and Maryhill, to the east of Carntyne, and to the south of Cathcart and Pollokshaws, were for the most part areas on the periphery of the City which had not been developed for suburban housing. The boundary of the City has thus become very irregular.

The municipal wards to which the various areas have been added and the number of persons resident therein, as given by the City Assessor, are as follows:—

Municipal Ward.	No. of Inhabited Houses.	House Population.	Institutional Population.	Total Population.
1. Shettleston and Tollcross ...	119	436	215	651
8. Provan	131	540	—	540
10. Springburn	160	599	1,037	1,636
19. Ruchill	8	40	—	40
21. Maryhill	39	115	—	115
31. Fairfield	—	—	—	—
32. Pollokshields	—	—	—	—
34. Pollokshaws	199	819	62	881
37. Cathcart	28	119	—	119
38. Yoker and Knightswood ...	599	1,891	111	2,002
	<u>1,216</u>	<u>4,559</u>	<u>1,425</u>	<u>5,984</u>

A small outline plan showing recent extensions of the boundaries forms the frontispiece of this Report.

As stated above, the total increase of the population of the City is 7,962, including the added number of persons in the new areas, namely, 5,984, so that the estimated population of the City before extension has thus been increased by less than 2,000. The excess of births over deaths was 6,963, a few of which would effier to the added areas as from 15th May, the date of extension. The apparent loss of natural increase is therefore in the region of 5,000. Some part of this loss is due to the removal of families to houses beyond the boundaries, and the transfer of others to industrial districts elsewhere. This latter aspect of the question is confirmed by the following extract from the Annual Report of the Insurance Committee for the Burgh of Glasgow for 1938, regarding the transfer of index slips to and from Scotland (from the figures supplied by the Index Clearance Committee).

"During the 2½ years ended 31st December, 1938, there were transferred to England from Scotland 39,925 index slips, and from England to Scotland 19,257, so that in the thirty months there was a nett loss to Scotland of 20,668 insured persons. The figures for Scotland to Wales and *vice versa* are 449 and 329 and from Scotland to Northern Ireland and *vice versa* 1,152 and 2,257 respectively. The figures for the last six months of the period under review show a considerable decline in transfers."

Ward Population.—With such a small increase in the total population, the differences in ward population compared with the previous year are not large, except in some of the extended wards as, for instance, Yoker and Knightswood with an increase of 2,473; Springburn, 2,079; Pollokshaws, 1,723; and Provan, 1,365. Although Pollokshields Ward was extended by 159 acres there were no persons resident in the added area. There has, however, been an increase in the population of 1,730, as a result of the occupancy of houses built by the Corporation in the housing schemes within the former boundary.

Most of the other wards show small decreases, the largest being 809 in Fairfield, followed by 632 in Gorbals and 173 in Calton.

The ward distribution of the population is given in Table I in the Appendix.

Institutional Population.—The total number of persons resident in institutions is now 32,549, an increase of 2,128 on the number for the preceding year. Of this increase, 1,425 are in institutions situated in the areas recently added to the City, and 1,037 of this number are in one institution in the extended Springburn ward. The total increase of institutional population in this ward is 1,369, the difference being accounted for by the larger number of patients in Stobhill Hospital. Other increases of note are 345 in Park ward, due to the opening of a large commercial and residential hotel, and 293 in Blythswood, and 254 in Exchange, caused, no doubt, by the influx of visitors to the City in connection with the Empire Exhibition. There are quite a number of decreases, the most important of which is 667 in Fairfield ward. This reduction is associated with the reconstruction of several large wards in the Southern General Hospital.

Acreage.—The acreage of the City and for each municipal ward is given in Table I of the Appendix. The total area of the City is now 39,725 acres, compared with 30,044 acres for the City before

the extension, an increase of 9,681 acres. The latter figure has appeared in the records for some years as 30,046, but in the re-adjustment of the acreages for the extended wards it was discovered that an area of about two acres at Polmadie had erroneously been included within the City. Making this adjustment, the acreage of Hutchesontown ward is now 387 instead of 389, a correction which was made under the provisions of the Glasgow Corporation Order, 1934.

The boundaries of certain wards adjacent to the extended areas have been adjusted and the increases resulting therefrom are shown in the following statement.

Municipal Ward.	Former Acreage.	Added Acreage.	Present Acreage.
1. Shettleston and Tollcross ...	1,061	412	1,473
8. Provan	1,293	1,642	2,935
10. Springburn	2,748	1,993	4,741
19. Ruchill	1,766	339	2,105
21. Maryhill	1,391	819	2,210
31. Fairfield	1,402	1	1,403
32. Pollokshields	4,678	159	4,837
34. Pollokshaws	1,847	1,477	3,324
37. Cathcart	1,327	1,622	2,949
38. Yoker and Knightswood	1,430	1,217	2,647

Density.—The average number of persons per acre is now 28, against 37 for the former area. The lowest ward density is now in Springburn ward with 6 persons to the acre, followed by Pollokshaws with a density of 8, and Pollokshields with 9, while densities of less than 20 are recorded in four other wards. The ward with the highest density is still Woodside, where the number of persons to the acre is 188, followed by Gorbals with 168, Townhead with 151, and North Kelvin with 142.

Inhabited and Empty Houses.—The numbers of inhabited and empty houses in each municipal ward, according to a return supplied by the City Assessor, are given in Table II in the Appendix.

The total number of inhabited houses in the City is 280,561, representing an increase of 2,835 on the total for the previous year. As, however, there were 1,216 houses in the areas added to the City, the net increase over the old City was only 1,619. The largest ward increase in occupied houses was 632 in Yoker and Knightswood but, as stated above, 599 of these are situated in the area added to that ward, while other wards in respect of which a similar adjust-

ment requires to be made are Shettleston and Tollcross, Provan, Pollokshaws, and four others in lesser degree. The largest increase in the area before extension was in Pollokshields where there are 468 additional inhabited houses, while Cowlairs had 288 and Kelvinside 263. Reductions, mostly on account of slum clearance schemes, were recorded in Cowcaddens with 182 fewer occupied houses, Gorbals with 119, and Anderston with 112.

The number of unoccupied houses as at Whitsunday, 1938, has again been considerably reduced, the total now being 745 against 1,348 in 1937. The total reduction is 603, most of which, 379, relates to houses of five apartments and upwards. The number of unoccupied houses of this size in Pollokshields ward was reduced by 58, in Kelvinside by 53, in Park by 51, and in North Kelvin by 43. The unoccupied four apartment houses were 113 fewer and there were also reductions in each of the smaller sizes of house, as shown in the following table.

NUMBER OF UNOCCUPIED HOUSES CLASSIFIED ACCORDING
TO NUMBER OF APARTMENTS.

			Old City		Extended City.				
			1913	1921	1913	1934	1936	1937	1938
One Apartment, ...	...	...	4,169	33	154	169	167	187	156
Two Apartments, ...	...	...	9,762	17	155	160	100	150	95
Three	„	...	2,731	9	263	800	166	143	118
Four	„	...	954	8	443	1,775	471	193	80
Five	„	and up ...	1,094	76	902	1,523	1,075	675	296
			18,710	143	1,917	4,427	1,979	1,348	745

Dean of Guild Linings.—In Table III in the Appendix is given the number of Dean of Guild Linings since 1919, according to size and house. For the year to 31st August, 1938, the total number of Linings granted was 5,959, the largest since 1928. This figure is 4,088 more than the number granted during the preceding year, which was considerably below the annual average. Most of the houses were of three and four apartments, linings for the former numbering 2,017, and for the latter, 3,068, sizes which are usually built by the Corporation in housing schemes. Linings for five apartment houses numbered 824 and for larger sizes, 50.

METEOROLOGY.

The weather conditions during 1938 were bad, although not from a health point of view for, as will be recorded in dealing with vital statistics in Section II of the Report, the mortality in various important aspects was the lowest on record. In respect of frequency and amount of rainfall the year was one of the worst for many years. In the spring months of February, March and April, the rainfall totalled only 5.24 inches; there was in fact a period of drought during March and April. But the total rainfall recorded was 49.76 inches, the highest since records were begun 65 years ago, and during the currency of the Empire Exhibition the rainfall was excessive, 30 inches being recorded from the beginning of May until the end of October. The rainfall continued heavy until the middle of December and the weather, which was comparatively cold during the summer months, remained mild until a period of frost which began about the end of the second week of December. The highest monthly rainfall was 8.14 inches in October which had 28 rainy days, compared with only 7 in April. Altogether there were 242 days during the year on which rain was recorded, against 212 during 1937.

The high rainfall was associated with an average temperature (48.1° F.) above the mean of the previous year. The extremes were less marked, the absolute maximum (76° F.) being recorded in August and the absolute minimum (20° F.) during December.

Severe gales prevailed at times, particularly at the beginning and end of June and again in September.

The number of hours of bright sunshine recorded at Springburn Park, 1,174, is above the average of the previous ten years. This relatively high total was due to the amount of sunshine recorded during the dry spell in April (162 hours), which compares with 66 during the same month of 1937. The maximum monthly number of hours of sunshine was 189, recorded in May, which, however, was lower than the 203 hours in June, the maximum month for the previous year.

CENTRAL HEALTH LECTURES.

A course of Central Health Lectures on health subjects of interest to the general public, and especially to those engaged in social and welfare work, was held in the M'Lellan Galleries during the winter of 1938-39, when the total attendances numbered 2,500.

The following is the syllabus of the course:—

1938.	Subject.	Lecturer.
Dec. 11—	"Health Department Films and Talk"	Dr. R. J. Peters, D.P.H.
1939.		
Jan. 29—	"Cancer,"	Dr. Alex. G. Mearns.
Feb. 28—	"Health Lecture illustrated by Films,"	Dr. A. S. M. Macgregor, D.P.H.
Mar. 19—	"The Troublesome 'Teens—Causes and Remedies,"	Dr. T. Drummond Shiels.

DISTRICT HEALTH LECTURES.

These lectures were, as usual, given by medical members of the staff of this Department, who also gave talks and lectures to Trade Union Societies, social organisations, guilds, etc., during the year, to the number of 70.

The District Lectures were as follows:—

District	1938.	Subject.	Lecturer.
East	Nov. 16—	"Health in Childhood : Strength in Manhood,"	Dr. Doris McWalter.
South-East	Nov. 22—	"Food and Physical Fitness,"	Dr. John Walker.
	1939.		
North	Jan. 18—	"Health Films and Child Wel- fare Talk,"	Dr. Margaret Gibson.
South	Jan. 19—	"Health Films and Child Wel- fare Talk,"	Dr. Doris McWalter.
South-West	Mar. 29—	"Health and Fitness " ...	Dr. William C. Gunn.

The attendances at these lectures totalled approximately 670. All the lectures were illustrated by educational films, usually on health subjects.

BLIND PERSONS ACTS, 1920 AND 1938.

During the year two important enactments relating to the blind came into operation—the Blind Persons Act, 1938, and the Prevention and Treatment of Blindness (Scotland) Act, 1938. The Blind Persons Act, 1938, provides among other things that a blind person shall be entitled to an Old Age Pension at 40 years of age instead of 50 years as was the case under the 1920 Act. In addition the new Act makes it obligatory on local authorities to provide assistance for the blind (not being either assistance in an institution or medical assistance), under the Blind Persons Act and not by way

of Poor Relief. In this connection it may be pointed out that most of the Local Authorities in the Joint Committee for the Blind, Glasgow and South-West Scotland, had already formulated schemes of assistance other than by Poor Relief for the necessitous blind in their areas. The Prevention and Treatment of Blindness (Scotland) Act, 1938, came into operation on 23rd June and gives powers to a Local Authority to make such arrangements as they think desirable and as may be sanctioned by the Department of Health for Scotland for assisting in the prevention of blindness, and in particular for the treatment of persons who are suffering from any disease of or injury to the eye.

Work of the Regional Clinic.—During the year 802 persons were examined for the first time, of whom 691 were examined at the clinic and 111 at home. In addition, 158 applicants were re-examined, making for the year a total of 960 cases examined. There was a decrease in the number of candidates examined as compared with the previous year, the comparative figures for 1937 being 869 first examinations and 147 re-examinations, making a total of 1,016 cases examined. Of the 802 candidates examined, 503 or 62·7 per cent. were certified blind within the meaning of the Act. The work of the clinic since its inauguration in 1929 is summarised in the following statement:—

Year.	Number Examined.	Percentage Certified Blind.	Number Re-examined.
1929 (4 months),	339	50·0	—
1930,	1,166	62·4	75
1931,	912	61·7	147
1932,	711	56·3	145
1933,	652	58·7	176
1934,	673	62·6	115
1935,	687	68·6	109
1936,	930	69·7	175
1937,	869	61·9	147
1938,	802	62·7	158
	<hr/> 7,741	62·3	1,247 <hr/>

Source of Candidates.—The source of candidates is shown as follows:—

Applicants for Blind Pension,	308
Applicants for increased Public Assistance,	253
Applicants for Technical Training,	39
Applicants for Free Tramway Pass,	22
Applicants referred by Mission to Outdoor Blind ...	172
Wireless Licence,	—
Unclassified,	8

The largest number was examined in connection with applications for Blind Pensions, this being due, of course, to the earlier age for pensions now provided for in the Blind Persons Act, 1938.

TABLE I.

SHOWING THE AGE AND SEX INCIDENCE OF APPLICANTS CLAIMING TO BE BLIND EXAMINED AT THE CERTIFYING CLINIC DURING THE YEAR 1938.

Age.	Certified			Rejected.		
	Males.	Females.	Total.	Males.	Females.	Total.
—1,	—	—	—	—	—	—
1-4,	1	—	1	—	—	—
5-15,	4	2	6	6	3	9
16-29,	13	14	27	12	12	24
30-39,	18	15	33	19	5	24
40-49,	50	29	79	20	15	35
50-59,	52	48	100	32	28	60
60-69,	64	59	123	46	32	78
70+,	69	65	134	41	28	69
	271	232	503	176	123	299

From the above table it will be seen that 564 of the applicants, or 70.3 per cent., were over 50 years of age, as compared with 69.4 per cent. in the previous year and 74.0 per cent. in 1936. As in previous years, male applicants outnumbered female.

It may be observed also that of the 503 persons certified blind, 0.2 per cent. were below school age (1-5 years), 1.2 per cent. were of school age (5-15 years), 27.6 per cent. were between 16 and 49 years, and 71.0 per cent. were over 50 years of age.

TABLE II.

SHOWING THE ALLOCATION OF THE APPLICANTS EXAMINED DURING 1938 AT THE CERTIFYING CLINIC AMONG THE LOCAL AUTHORITIES COMPOSING THE JOINT-COMMITTEE FOR THE BLIND FOR GLASGOW AND THE SOUTH-WEST OF SCOTLAND.

	Certified.			Rejected.		
	Males.	Females.	Total.	Males.	Females.	Total.
Glasgow,	130	120	250	106	51	157
Airdrie,	3	4	7	4	3	7
Coatbridge,	9	2	11	3	6	9
Hamilton,	7	8	15	8	—	8
Motherwell and Wishaw ...	3	4	7	3	2	5
Rutherglen,	1	1	2	2	—	2
Other Lanarkshire,	34	21	55	23	19	42
Greenock,	9	7	16	3	6	9
Paisley,	13	7	20	—	2	2
Port-Glasgow,	3	2	5	3	—	3
Other Renfrewshire,	1	5	6	—	1	1
Dumbarton,	—	1	1	—	—	—
Clydebank,	6	5	11	—	4	4
Other Dunbartonshire, ...	9	5	14	1	2	3
Falkirk,	3	3	6	1	3	4
Stirling,	1	—	1	1	—	1
Other Stirlingshire,	3	6	9	3	3	6
Ayr,	5	3	8	2	—	2
Kilmarnock,	—	2	2	1	4	5
Other Ayrshire,	17	13	30	8	8	16
Argyll County,	6	9	15	2	3	5
Bute County,	2	1	3	1	—	1
Dumfries Burgh,	6	3	9	1	6	7
Not Stated,	—	—	—	—	—	—
Total,	271	232	503	176	123	299

Of the applicants examined, 407, or 50.7 per cent., resided in Glasgow, compared with the corresponding percentage of 52.1 during the preceding year.

Causes of Blindness.—The causes of blindness of the 503 accepted cases during the year are shown below. The largest number is included in the category “Congenital” and “Undetermined.” The most important individual causes of blindness are cataract, myopia, venereal diseases, septicaemia, vascular disease and glaucoma.

CAUSES OF BLINDNESS.

Congenital and Undertermined—

Congenital anomalies (14) and developmental defects (21), ...	35
Myopia, ...	87
Glaucoma, primary, ...	37
Cataract, primary, ...	108
Other primary ocular defects (primary detachment), ...	5

*Infectious and Toxic—**(a) Exogenous :*

Ophthalmia neonatorum, ...	13
Trachoma ...	5
Local septic infection of coats of eye, ...	2
Other local septic infections (Gonorrhœa) ...	1

(b) Endogenous :

Gonorrhœa, ...	—
Syphilis, congenital, ...	21
Syphilis, acquired, including not definitely congenital, ...	27
Specific fevers (Influenza, measles), ...	5
Meningitis (non-tuberculous), including cerebro-spinal fever, ...	1
Tuberculosis, ...	5
Phlyctenular, strumous and similar, not definitely tuberculous, ...	9
Septicæmia, Acute, ...	—
Septicæmia, chronic ; autotoxic, focal sepsis, ...	45
Other general infections and organismal diseases, ...	4

Traumatic and Chemical—

Birth trauma, ...	—
Non-industrial trauma, ...	4
Industrial trauma, ...	9
Chemico-toxic, non-industrial (tobacco), ...	2
Scheduled industrial diseases (lead) (pyroxylin) (carbon bi-sulphide) (aniline) (phosphorus) (glass-blowers' cataract) (metal workers' cataract) (miners' nystagmus), ...	—
Sympathetic ophthalmia, ...	10

Systemic Diseases—

Diabetes, ...	10
Nephritis, ...	2
Pregnancy, ...	2
Vascular diseases, including cerebral vascular lesions, ...	38
Intracranial neoplasm, ...	3
Other diseases of central nervous system, ...	6

<i>Not Ascertainable Definitely,</i> ...	7
--	---

Total, ... 503

In 1938, 158 cases were re-examined, compared with 147 in 1937. The alteration in the decision of the clinic as the result of re-examination was as follows:—

(a) Certified blind on first examination and decision unaltered on re-examination,	21
(b) Certified blind on first examination and decision reversed on re-examination,	14
(c) Certified not blind on first examination and decision unaltered on re-examination,	62
(d) Certified not blind on first examination and decision reversed on re-examination,	28
(e) Certified blind on second examination and decision unaltered on re-examination,	3
(f) Certified blind on second examination and decision reversed on re-examination,	—
(g) Certified not blind on second examination and decision unaltered on re-examination,	16
(h) Certified not blind on second examination and decision reversed on re-examination,	4
(i) Others,	10
Total,	<u>158</u>

During the year 14 cases previously certified blind were de-certified.

Serological Tests for Syphilis.—Specimens of blood were submitted to the Kahn test in 362 of the cases examined at the clinic, and 27, or 7.5 per cent., were reported positive. The percentage of specimens giving positive results was 9.1 in 1931, 9.2 in 1932, 11.8 in 1933, 9.6 in 1934, 6.8 in 1935, 8.7 in 1936, and 8.9 in 1937. It should be mentioned that all specimens of serum showing a positive Kahn test are also submitted to the Wassermann reaction for confirmation.

Follow-Up of Patients.—During the past few years an attempt has been made to follow up patients examined at the Regional Blind Clinic whose vision was considered by the examining surgeon as likely to benefit from further treatment. This scheme of after-care has been made possible by the co-operation of the Mission to the Outdoor Blind for Glasgow and the South-West of Scotland. The home teachers make special enquiries twice yearly regarding such patients and report progress. Where operative or other treatment has been completed, the patient is summoned to the clinic for examination and the improvement or otherwise noted, while the teacher endeavours to persuade defaulters to attend for advice.

Enquiries over a more extended period will be necessary before the value of the scheme can be properly assessed, but the results as regards 341 cases certified blind and now fully disposed of are shown as follows:—

TREATMENT CARRIED OUT.

Treatment Recommended.	No. of Cases.	Total.	Still Blind.	Not Now Blind.	Dead.	Unwilling.	Unfit.	Others.
Surgical, ...	325	41	20	21	55	86	83	60
Medical, ...	16	5	5	—	2	3	—	6
Total,	341	46	25	21	57	89	83	66
		13.5%			16.7%	26.1%	24.3%	19.4%

While the treatment recommended at the clinic was carried out in only 46 persons, or 13.5 per cent. of the total, it will be observed that in a considerable proportion of those who received surgical attention the vision was sufficiently improved to allow of their removal from the category of blindness. Many of the patients on more detailed examination were found to be unfit for operative measures, while a large number, mainly for reasons of an economic nature, were unwilling to undergo treatment.

The value of the scheme of after-care, apart from other considerations, has been amply demonstrated by the substantial reduction in the number of re-examinations which would otherwise have been necessary.

LEGISLATION.

During the year the following Acts of Parliament, Regulations, &c., dealing directly with Public Health (in Scotland), or having a bearing thereon, came into operation:—

ACTS OF PARLIAMENT.

Glasgow Corporation Order Confirmation Act, 1938.

Air Raid Precautions Act, 1938.

Population (Statistics) Act, 1938.

Prevention and Treatment of Blindness (Scotland) Act, 1938.

Housing (Agricultural Population) (Scotland) Act, 1938.

Registration of Still-Births (Scotland) Act, 1938.

Nursing Homes Registration (Scotland) Act, 1938.

CIRCULARS, ORDERS, REGULATIONS, &C., ISSUED DURING 1938.

Blindness—

- Department of Health, P.A. Circular No. 56 of March 2, 1938—Welfare of the Blind. Registration of Blind Persons.
 Department of Health, Circular No. 1 of March 25, 1938—Blind Persons Bill.

Air Raid Precautions—

- Scottish Education Department, Circular M.123 of January, 1938—Air Raid Precautions in Schools.
 Scottish Office, Circular No. 3323 of January 12, 1938—Experiments in Anti-Gas Protection of Houses.
 Scottish Office, Circular No. 3331 of January 28, 1938—A.R.P. Act, 1937. Fire Precautions.
 Home Office, Circular 701,074/5 of January 28, 1938—Air Raid Precautions Act, 1937.
 Home Office, Circular 701,513/8 of April 26, 1938—First Aid Posts.
 Home Office, Circular 701,527/34 of February 7, 1938—Civilian Anti-Gas Schools.
 Home Office, Circular 701,590/17 of August 22, 1938—Air Raid Precautions. Schools.
 Home Office, Circular 702,445/3 of July 6, 1938—Local Storage and Distribution of Civilian Respirators.
 Home Office, Circular 703,124/9 of November 30, 1938—Maps for use in connection with A.R.P. Schemes.

Statistics—

- Department of Health, Order No. 557/S.32 of June 4, 1938—Registration of Births and Deaths (Statistics) Registration (Scotland).

Maternity and Child Welfare—

- Department of Health, Circular N.M. & C. No. 55 of January 5, 1938—Notification of Births.
 Department of Health and Scottish Education Department, Memo. N.M. & C. No. 56 of March, 1938—School Health Administration.
 Department of Health Circular N.M. & C. No. 58 of April 22, 1938—Maternity Services (Scotland) Act, 1937—Remuneration of Medical Practitioners.
 Department of Health and Scottish Education Department, Memo. N.M. & C. No. 59 of June 1, 1938—School Health Administration. Factories Act, 1937.
 Department of Health, Circular N.M. & C. No. 60 of June 3, 1938—School Health Administration. Revision of School Health Records and Annual Reports.
 Department of Health, Circular N.M. & C. No. 61 of July 15, 1938—Refresher Courses for Health Visitors, Aberdeen, October 3-8, 1938.
 Department of Health, Circular N.M. & C. No. 65 of November 25, 1938—Registration of Still-Births.
 Department of Health, Order No. 1353/S.73 of November 8, 1938—Registration of Still-Births Regulations (Scotland), 1938.
 Department of Health and Scottish Education Department, Memo. N.M. & C. No. 63 of September, 1938—School Health Administration. Instruction of Children leaving School.

Infectious Disease—

- Ministry of Health, Circular No. 1677 of April 22, 1938—P.H. (Aircraft) Regulations, 1938.
 Ministry of Health, Order No. 299 of April 17, 1938—P.H. (Aircraft) Regulations 1938.
 Ministry of Health, Circular No. 1724 of September 5, 1938—Smallpox.
 Ministry of Health, Memorandum 215/Med. of September, 1938—Smallpox.

Housing—

Department of Health, Circular No. 101 of February 25, 1938—Organisation of Schemes.

Department of Health, Circular No. 106 of July 1, 1938—Housing (Rural Workers) Amendment Act, 1938.

Department of Health, Circular No. 108 of July 29, 1938—Housing (Agricultural Population) (Scotland) Act, 1938.

Milk—

Department of Health, Order No. 183/S.8 of February 18, 1938—Milk (Special Designations) Amendment Order No. 2.

Department of Health, Order No. 51 of March 17, 1938—Milk (Special Designations) Amendment Order (Scotland), 1938.

Department of Health Circular No. 53 of May 16, 1938—Milk (Special Designations) Order (Scotland).

Department of Health, Order No. 55 of September 29, 1938—Milk (Special Designations) Order (Scotland), 1936; Milk (Special Designations) Amendment Order (No. 2) (Scotland), 1938.

Department of Health, Order No. 1158/S.58 of September 22, 1938—Milk (Special Designations) Amendment Order No. 2.

Food—

Department of Health, Circular No. 52/1938 of April 4, 1938—Public Health (Imported Food) (Scotland) Regulations, 1937. Recognition of Official Certificates, Argentine, Australia, Belgium, Canada, Chile, Danzig, Netherlands, New Zealand, Shanghai, Sweden, Uruguay.

Diseases of Animals—

Ministry of Agriculture and Fisheries, Order No. 165—Diseases of Animals. The Tuberculosis Order, March 1, 1938.

Ministry of Agriculture and Fisheries, Order No. 191—Diseases of Animals (Disinfection) Order, February 18, 1938.

Ministry of Agriculture and Fisheries, Order No. 202—Diseases of Animals. The Rabies Order, March 3, 1938.

Drugs—

Ministry of Health, Order No. 1547 of December 15, 1938—Poisons List (Amendment) Order, 1938.

Ministry of Health, Order No. 1548 of December 15, 1938—Poisons (Amendment) Rules, 1938.

Public Health—

Department of Health, P.H. Circular No. 28/1938 of March 7, 1938—Regulations of Conditions in Offices.

Ministry of Health, Order No. 611 of June 24, 1938—Factories. Sanitary Accommodation Regulations, 1938.

Hospitals—

Department of Health, Circular No. 12 of August 24, 1938—Interference with Radio Reception caused by Electro-Medical Apparatus.

Department of Health, Hospital Circular No. 14 of November 30, 1938—Nursing Homes Registration (Scotland) Act, 1938.

Department of Health, Order No. 1505/S.79 of December 12, 1938—Nursing Homes Registration Regulations (Scotland), 1938.

SECTION II.

VITAL STATISTICS.

In this Section and in the Appendix, the figures and tables dealing with vital statistics include those referable to the areas added to the city as from 15th May, the date of the extension of the boundaries. The Registrar-General, from the records of the added areas as from the beginning of the year, will no doubt make such adjustments as are necessary in order to give accurate statistics for the extended city for the complete calendar year when his Report is published. The differences cannot be large, as, for instance, with deaths the estimated number in the new areas for the four and a half months from 1st January to 15th May would not be more than 30 on a population of 4,558, the estimated house population, at the average death rate for the city.

SUMMARY.

	1936.	1937.	1938.
Population	1,119,600	1,119,863	1,127,825
Acreage	30,046	30,046	39,725
Persons per acre	37	37	28
Number of Inhabited Houses	275,438	277,726	280,561
Deaths—Number registered	17,894	18,007	16,411
„ After correction for Transfers	16,406	16,379	15,016
Births—Number registered	23,236	23,268	21,960
„ After correction	22,273	22,176	21,979
Death rate per 1,000 living—			
All causes	14.65	14.63	13.31
Birth rate per 1,000 living	19.89	19.80	19.49
Deaths under One Year—After correction	2,429	2,313	1,919
„ „ „ Per 1,000 births	109	104	87

BIRTHS.

The number of births registered, corrected for outward transfers and including those transferred inwards, was 21,979 in 1938, compared with 22,176 in 1937, and 22,273 in 1936. The birth rate is therefore 19.49 per thousand persons which is a little lower than the rate for last year, namely, 19.80, and for 1936 when it was 19.89. The birth rate has remained practically stationary at between 19 and 20 during the past six years. This is in keeping with the experience of other large towns, as shown on the following page. The Glasgow birth rate, however, is uniformly in excess of the other large towns listed.

There is always considerable disparity between the birth rates of the various municipal wards. The rate for Kelvinside during the year was 9.1, the lowest in the city, followed by 9.3 in Langside, rates which may be compared with 30.1 in Gorbals, 28.3 in Mile-end, and 28.1 in Exchange, while other wards with rates considerably above the average for the city were Cowcaddens, Woodside, Dalmarnock and Kinning Park. In these wards the birth rates were in excess of the corresponding rates for the previous year.

Some of the wards with an excess of deaths over births are as follows:—

WARD.	Death Rate per Million.	Birth Rate per Million.	Excess of Death Rate over Birth Rate.
Langside	12,662	9,263	3,399
Kelvinside	11,614	9,101	2,513
Camphill	12,598	10,713	1,885
Cathcart	11,658	11,213	445
Dennistoun	12,729	12,541	188

The numbers of births in Gorbals and Provan, Ruchill, Cowcaddens and Hutchesontown, are considerably in excess of the deaths.

The following information from the Registrar-General's returns shows the birth rates for Glasgow and Scotland since 1871:—

	Glasgow.	Scotland.		Glasgow.	Scotland.
1871-1880 ...	36.6	34.9	1926-1930 ...	22.1	20.0
1881-1890 ...	36.5	32.4	1931-35 ...	20.0	18.2
1891-1900 ...	33.7	30.3	1936 ...	20.0	17.9
1901-1910 ...	31.2	28.4	1937 ...	19.8	17.6
1911-1920 ...	25.7	24.2	1938 ...	19.5	17.7
1921-1925 ...	26.0	23.0			

On the basis of local returns, the following comparison is made of the rates for several years in Glasgow and other towns:—

	1936.	1937.	1938.
Glasgow	19.9	19.8	19.5
Edinburgh	15.9	15.8	16.1
Dundee	17.7	17.4	17.6
Aberdeen	17.2	17.1	16.9
London	13.6	13.4	13.4
Liverpool	20.1	19.3	18.7
Manchester	14.7	14.3	14.8
Birmingham	15.8	16.1	16.7

ILLEGITIMATE BIRTHS.

The number of illegitimate births in 1938 was 1,257, or 14 less than those for the preceding year, the percentage of the total births remaining unchanged from last year—5.7. The distribution of these births throughout the municipal wards and their respective percentages of the total births are given in Appendix Table V. While the greatest number was 115 in Gorbals ward, the highest proportion was 22.1 per cent. in Blythswood. The lowest percentage, 2.5, occurred in Camphill.

A more accurate comparison of the legitimate and illegitimate birth rates is obtained when the calculation is based on the number of females of child-bearing ages; the former on married women of 15 to 44 years of age, and the latter on the unmarried women and widows of the same ages. This is given in the following table:—

GLASGOW.—BIRTH RATES, DISTINGUISHING LEGITIMATE AND ILLEGITIMATE IN CERTAIN YEARS FROM 1871.

(Based on figures of Registrar-General.)

Year.		Number of Legitimate Births.	Rate per 1,000		Rate per 1,000 Unmarried Women and Widows 15-44 years.
			Married Women 15-44 years.	Number of Illegitimate Births.	
1871	...	17,118	298	1,749	27
1881	...	17,605	293	1,501	22
1891	...	18,304	283	1,553	21
1901	...	22,676	260	1,530	14
1911	...	19,966	229	1,603	14
1921	...	27,790	238	1,922	13
1931	...	21,504	176	1,427	10
1935	...	20,789	165	1,313	8
1936	...	20,952	171	1,321	8
1937	...	20,905	171	1,271	8
1938	...	20,718	169	1,264	8

MARRIAGES.

There were 10,933 marriages in 1938 compared with 10,597 in 1937. These numbers represent rates of 9.7 and 9.5 of the population respectively. The marriage-rate has remained practically constant since 1871 except in the years of trade depression such as occurred in 1932-33 when it fell to 8.3. The following table shows the marriages per thousand of the population since 1871.

GLASGOW.—MARRIAGES PER 1,000 PERSONS LIVING.

1871-1880	...	...	9.1	1926-1930	...	...	8.5
1881-1890	...	...	9.3	1931-1935	...	...	8.8
1891-1900	...	...	9.4	1936	...	...	9.2
1901-1910	...	...	8.8	1937	...	...	9.5
1911-1920	...	...	9.7	1938	...	...	9.7
1921-1925	...	...	9.3				

DEATHS.

The total number of deaths registered during the year was 16,411, which becomes 15,016 after adjustment for outward and inward transfers. This corrected figure is lower by 1,363 than the corresponding number for the preceding year. The death rate per thousand of the population is therefore 13.3 against 14.6 for 1937. This is the lowest death rate ever recorded for the city, the previous lowest being 13.4 in 1933, a year which was bright and sunny with a rainfall much below the average. Although 1938 was unduly wet, the deaths due to pneumonia and those among infants were much fewer than usual. Infant mortality will be dealt within the next Section of this Report and pneumonia in Section V on Respiratory Diseases, &c. Conditions which have influenced the low mortality of 1938 have been general throughout the country for in many other towns the mortality has been lower than usual. Respiratory conditions, mostly pneumonic, are associated as a complication of many of the other classified causes of death. It is likely therefore that pneumonia in its many infectious types has been less prevalent than usual. Its association with other acute infectious diseases influences the mortality and this is illustrated by the variation in the seasonal death rate.

Quarterly Death Rates.—The following table of quarterly death rates shows the variation in the seasonal rates during the past three years:—

	1936.	1935.	1938.
1st Quarter	17.4 { Measles, Influenza and Pneumonia prevalent.	18.6 { Whooping- cough, Influenza and Pneumonia prevalent.	14.9 { Measles prevalent.
2nd „	14.3 { Measles and Diarrhoeal Diseases under 2 years of age prevalent.	13.0 { Whooping- cough prevalent.	13.5 { Measles prevalent.
3rd „	11.7	11.5 { Diarrhoeal Diseases prevalent	11.6
4th „	14.8 { Whooping- cough and Diarrhoeal Diseases under 2 years of age prevalent.	15.3 { Measles and Respiratory Diseases prevalent.	13.4 { Whooping- cough prevalent.

Ward Death Rates.—The municipal ward death rates are given in Table VI. in the Appendix with the corresponding rates for the two preceding years. With the reduction of the death rate to a comparatively low level since the war, there is not now the same marked disparity between the good residential and the poorer working-class districts. The highest rate, 19.9, was recorded in Blythswood, which is followed by 18.8 in Exchange, 16.4 in Calton, 16.1 in Gorbals, and 15.9 in Mile-end. The lowest rates were 9.2 in Yoker and Knightswood, 10.5 in Maryhill, 10.9 in Ruchill, followed by 11.0 in Shettleston and Tollcross.

According to the Registrar-General's returns, the rates for Glasgow since 1881 have been as follows:—

GLASGOW.—ALL CAUSES.—DEATH RATE PER 1,000 LIVING.

1881-1890 ...	...	...	24.22	1926-1930 ...	...	15.04
1891-1900 ...	...	...	21.53	1931-1935 ...	...	13.9
1901-1910 ...	...	...	19.56	1936 ...	...	14.5
1911-1920 ...	...	...	16.36	1937 ...	...	14.6
1921-1925 ...	...	...	15.49	1938 ...	...	15.0

The following is a comparison of death rates based on local returns of several large towns in Scotland and England:—

GLASGOW AND SEVERAL TOWNS.—DEATH RATE PER 1,000 LIVING.

				1936.	1937.	1938.
Glasgow	...	...	...	14.5	14.6	13.3
Edinburgh	...	...	...	13.4	14.0	12.7
Dundee ...	...	...	...	14.2	15.0	13.7
Aberdeen	...	...	...	12.7	13.0	12.0
London ...	...	...	...	12.4	12.5	11.4
Liverpool	...	...	...	12.9	13.2	12.3
Manchester	...	...	...	13.5	13.5	12.4
Birmingham	...	...	...	11.3	11.7	10.9

Transfer Deaths.—The deaths on which the above rates for Glasgow are calculated include those of persons formerly resident in Glasgow, but dying in institutions or elsewhere outwith the City. On the other hand, those dying within, but with home addresses outside, are excluded. The "inward transfers" numbered 536 during 1938, compared with 491 and 569 for the two preceding years, while the "outward transfers" numbered 1,931, compared with 2,119 and 2,057. The causes of deaths in both these groups are given in Appendix Table No. VII.

CAUSES OF DEATH.

The principal causes of death are summarised in the following table:—

SUMMARY OF DEATH RATES PER MILLION FROM PRINCIPAL CAUSES.

	1936.	1937.	1938.
General Diseases—			
(a) Infectious	944	816	777
(b) Tuberculous—			
(1) Phthisis	874	853	851
(2) Others	263	211	242
(c) Malignant (cancer, &c.)	1,440	1,393	1,487
Diseases of the nervous system	1,382	1,173	1,158
Diseases of the circulatory system	3,459	3,745	3,528
Diseases of respiration	2,051	1,973	1,464
Congenital defects and malformations (including premature birth)	823	840	718
Violence	557	535	566
All other causes	2,915	3,087	2,523
All causes	14,708	14,626	13,314

The death rate from causes included under "Acute Infections" was 777 per million of the population, compared with 816 for the preceding year and 944 for 1936. The variations in the death rate for this group are largely determined by the prevalence of measles and whooping-cough or by the mortality among young children under two years of age from diarrhoea and enteritis. In 1938 measles was prevalent during the early months of the year, a period when pneumonia often supervenes especially among the very young. The deaths from measles numbered 257, equivalent to a death rate of 228 per million, against 26 for the preceding year and 278 in 1936. Whooping-cough, on the other hand, was considerably less prevalent and the deaths were less numerous, 88, so that the death rate was only 78, compared with 255 for 1937.

There were only 5 deaths from enteric and paratyphoid fevers, equivalent to a death rate of 4 per million, the same as for the preceding year. The mortality from scarlet fever has remained uniformly low during the past few years, despite considerable variations in the annual number of cases registered. There were 29 deaths, representing a rate of 26 per million, the same as for the preceding year. Diphtheria, however, was considerably more prevalent than it has been for more than a decade and the deaths were also increased, there being 132 compared with 116 during the

previous year and 54 for the year 1936. The case mortality, however, was lower, for the number of deaths per hundred cases was 4.7 in 1938 compared with 5.0 for the preceding year; in 1936 the percentage was 2.7.

The death rate from tuberculosis of the lungs was 851 per million, compared with 853 for the previous year. The rate has remained uniformly steady at around 850 during the past ten years with little variation except in 1934 when it fell to 783. Tuberculosis is dealt with in Section V of the Report. Mortality from the non-pulmonary forms of tuberculosis was slightly higher; the rate for the year being 242 against 211 for 1937. This increase was due to the higher death rate from tubercular meningitis, 133, against 108, and from other tuberculous diseases, 83 against 72 per million. The tubercular meningitis death rate has varied during the last few years. Some 95 per cent of the deaths occurred in hospitals.

In 1938, the diagnoses of 61 cases admitted to fever hospitals were altered from cerebro-spinal meningitis to tuberculosis, as against 51 during 1937.

Cancer as a cause of death continues its slow progressive upward movement, associated with the increasing average age of the population. There were 1,677 deaths during the year, a number which, because of the low total of the deaths from all causes, forms more than 11 per cent. of all mortality. The disease is again dealt with in more detail on pages 44 and 45.

With regard to diseases of the nervous system, the definite reduction shown in 1937 has continued into the present year; the death rate, 1,158 for 1938, compares with 1,173 during the preceding year. Previously the mortality varied between 1,300 and 1,400 per million. As regards the predominant cause of death in this group, *i.e.*, cerebral hæmorrhage, the death rate per million was 814 against 826 in the preceding year; in 1936 the rate was 977 per million. Deaths from meningitis (non-tuberculous) were more numerous, 52 against 30 in 1937, the respective death rates being 46 and 27 per million. The latter, however, was an exceptionally

low rate compared with those of recent years. The death rate from other nervous diseases, 254, was considerably below the figure of 290 for the preceding year.

Next to pneumonia the greatest reduction contributing to the lower death rate for the year occurred among diseases of the circulatory system. The death rate for this group in 1938 was 3,528 per million, against 3,745 for the preceding year. Practically the whole of this reduction was due to a diminished mortality from heart disease, 2,733 against 2,953 per million. This fall occurred mostly among the female population; there were 162 fewer deaths among them while the reduction for males was 62. This reduction is a reversal of the upward movement which had been taking place for a number of years and may, to some extent at least, be associated with the exceptional drop in pneumonia. The higher mortality from arterio-sclerosis, 616 per million against 606, is interesting for these rates are definitely above those of previous years. The rate for 1934 was only 377. Deaths from diseases of the circulatory system represent more than a quarter of the total deaths from all causes.

Diseases of the respiratory system, because of the very marked reduction, fall into third place as a cause of death, cancer being second. Deaths numbered 1,652, representing a rate per million of 1,464, compared with 1,973 for 1937 and 2,051 for 1936. These diseases are dealt with in more detail in Section V of this Report.

AGE AND SEX DISTRIBUTION.

The age and sex distribution of deaths is given in Appendix Table IX. For all causes the proportion per thousand of male and female deaths is as follows:—

	Age							
	—5	—15	—25	—35	—45	—65	65+	Total
Males	100	14	22	22	31	155	183	527
Females	78	13	23	24	29	112	194	473

Deaths from measles occurred equally in males and females, and all of the 133 male and 124 female deaths with the exception of two for each sex occurred under the age of 15 years. Almost 80 per cent. of the mortality occurs before the end of the second year of life.

In the case of whooping-cough, the deaths all took place before the children were of school age, female deaths numbering 48 and male deaths 40.

Fatal cases of scarlet fever were almost wholly confined to the first five years of life, 9 of the 14 male deaths and 8 of the 15 female deaths occurring during these years. As regards diphtheria the deaths in 1937 were equal in both sexes (58 in each case), but in 1938 there were 84 female deaths and 48 male deaths. Encephalitis accounted for 14 male and 9 female deaths, mostly in persons in middle life. Cerebro-spinal fever caused 19 male and 12 female deaths.

Deaths from pulmonary tuberculosis among males numbered 534 and among females 426, figures which are comparable with those of previous years, as is shown in the following summary:—

		1938.		1937.		1936.	
		Male.	Female.	Male.	Female.	Male.	Female.
—15 Years	...	33	31	22	21	26	31
—25 Years	...	112	167	101	160	95	167
—45 Years	...	204	167	231	178	225	164
45+ Years	...	185	61	186	56	196	75
		534	426	540	415	542	437

Deaths among young women between the ages of 15 and 25 is again apparent, considerably exceeding those among men of similar age. In later years the mortality is considerably heavier among males. Deaths of males between 25 and 45 years of age has fallen, 204 occurring in 1938 against 231 for the previous year.

The following table is introduced to show the variations that occur from year to year in the deaths due to tubercular meningitis among males.

			AGE.					
			—5	—10	—15	—20	20+	Total.
1938	...	...	39	17	9	10	7	82
1937	...	...	27	10	11	6	6	60
1936	...	...	52	15	11	12	10	100
1935	...	...	16	13	11	6	10	66

Deaths from syphilis numbered 20 among males, 5 of which were congenital, while there was only 1 congenital case among 7 female deaths. General paralysis of the insane was responsible for 36 male deaths and 14 female deaths, all with one exception occurring from middle life onwards. Deaths due to rheumatic fever numbered 42 males and 33 females; the corresponding figures were 56 and 34 in the preceding year. The excess of female deaths from diabetes, 116 against 35 males, is in somewhat the same ratio as for the preceding year but the totals are smaller.

Deaths from cerebral hæmorrhage were considerably more numerous among females, 529 females to 389 males, for the reason that more females survive to ages over 65 when most of the excess occurs. Under 20 years of age there were 4 deaths of males but no females. Deaths from other forms of nervous disease were more numerous among males.

Heart disease was the cause of more male deaths in the proportion of 1,647 to 1,436, the excess occurring among the males of older ages except above 75 years where females exceeded the males by 439 to 363.

With regard to respiratory diseases, 209 male children under one year of age died and 73 between one and two years; for female children the figures were 178 and 61 respectively. Nearly half the 684 male deaths and more than half the 474 female deaths occurred under the age of 15 years.

Males are somewhat more subject to diseases of the digestive system and abdominal organs. Peptic ulcer was the cause of 115 male deaths against 25 female deaths, and appendicitis caused 50 male deaths and 25 female deaths. Cirrhosis of the liver caused 27 male and 18 female deaths; other diseases of the liver caused 27 male and 48 female deaths. Diarrhœa of infants and young children caused 194 male deaths and 110 female deaths. Deaths among males from acute and chronic nephritis were more numerous this year, the ratio being 178 to 165 females, whereas for the previous year the respective figures were 161 and 178. The excess amongst males occurred at ages above 65 years. Congenital debility and other diseases of the immaturity group were responsible for 471 male deaths against 339 female deaths, almost all of which occurred in the first year of life. In the case of senility female deaths were

much in excess of males (214 to 134) all of which excess occurred at ages above 75 years because of the greater number of females surviving to older ages.

CANCER.

A detailed tabulation of the cancer deaths is again given on the following page showing the site of the disease in relation to sex and age. Altogether there were 1,677 deaths from cancer disease, compared with 1,560 in the previous year. The total this year represents 11 per cent. of deaths from all causes, as compared with 10 per cent. for 1937. Male deaths numbered 789 and female deaths 888. The summary table introduced a year ago is repeated below:—

				Males.	Females.
1927-31 ...	...	...	...	693	779
1932-36 ...	...	...	...	752	794
1937 ...	...	...	...	767	793
1938 ...	...	...	...	789	888

The reduction in the male deaths from cancer of the buccal cavity and the pharynx which occurred a year ago has been maintained, for the number is the same at 64; female deaths under this heading numbered 12 against 10 in 1937; most of these deaths occurred around the age of seventy. Males are more subject to cancer of the digestive organs, etc., and a considerable part of the total cancer deaths occurs under these headings. For instance, disease of the stomach and duodenum accounted for 190 male deaths, compared with 163 for the previous year; of the rectum, 73 against 63; and of the liver, etc., 47 against 34. The total male deaths from disease of the digestive organs, etc., was 500 against 444 female deaths. Deaths from cancer of the respiratory organs among males numbered 95, compared with 40 among females, the corresponding figures for 1937 being 105 and 38.

Among women, deaths from diseases of the uterus numbered 118, of the female genital organs 34, and of the breast 149, a total of 301, compared with 235, the total for 1937; thirty-five deaths occurred under 45 years of age. The male deaths from cancer of the genito-urinary organs numbered 73; a year ago the figure was 79. Deaths from cancer of the skin among males numbered 11 and among females 10, compared with 7 and 11 respectively in 1937. Details of age of the cancer deaths during the year are given in the following table:—

GLASGOW, 1938.—DEATHS FROM CANCER OF THE DIFFERENT SITES AS GIVEN IN THE INTERNATIONAL LIST OF
CAUSES OF DEATH, 1931.

SITE OF LESION.	MALES.										FEMALES.										BOTH SEXES.	Year 1937.	
	MALES.										FEMALES.											All Ages.	Both Males, Females, Sexes
	-15	-25	-35	-45	-55	-65	-75	75+	Total.	-15	-25	-35	-45	-55	-65	-75	75+	Total.					
Buccal Cavity and Pharynx ...	—	—	1	2	6	21	27	7	64	1	—	—	—	2	4	4	1	12	76	64	10	74	
Digestive Organs and Peritoneum—																							
(a) Oesophagus ...	—	—	2	2	4	11	8	8	35	—	—	—	2	2	4	6	2	16	51	32	16	48	
(b) Stomach and Duodenum ...	—	2	4	11	29	60	66	18	190	—	—	3	9	20	44	51	34	161	351	163	166	329	
(c) Rectum ...	—	—	2	1	6	26	20	18	73	—	1	1	3	4	9	11	7	36	109	63	28	91	
(d) Liver and Biliary Passages	2	—	—	1	9	11	19	5	47	—	—	—	2	7	11	17	11	48	95	34	51	85	
(e) Pancreas ...	—	—	1	1	4	11	11	1	29	—	—	—	—	2	11	8	5	26	55	29	26	55	
(f) Peritoneum ...	—	1	—	—	—	1	—	—	2	—	—	—	1	1	—	1	—	3	5	2	2	4	
(g) Other Digestive Organs ...	—	—	2	5	10	34	52	21	124	—	1	4	5	18	41	41	44	154	278	137	152	289	
Respiratory Organs ...	1	—	2	10	26	30	17	9	95	—	—	—	5	13	7	12	3	40	135	105	38	143	
Uterus ...	—	—	—	—	—	—	—	—	—	—	—	—	13	33	42	24	6	118	118	—	81	81	
Other Female Genital Organs ...	—	—	—	—	—	—	—	—	—	—	—	—	4	9	10	9	2	34	34	—	29	29	
Breast ...	—	—	—	—	—	—	—	—	—	—	—	5	13	33	47	33	18	149	149	—	125	125	
Male Genito-Urinary Organs ...	—	2	3	3	6	19	26	14	73	—	—	—	—	—	—	—	—	—	73	79	—	79	
Skin ...	—	—	—	1	—	5	3	2	11	—	—	—	—	1	—	6	3	10	21	7	11	18	
Other or Unspecified Organs ...	2	4	1	2	7	8	14	8	46	1	—	3	7	10	26	23	11	81	127	52	58	110	
Totals ...	5	9	18	39	107	237	263	111	789	2	2	16	64	155	256	246	147	888	1,677	767	793	1,560	

GLASGOW.—DEATHS FROM "SUICIDE AND OTHER VIOLENCE."

Year.	MALES.					FEMALES.					Both Sexes.
	-5 years.	-15 years.	-45 years.	+45 years.	Total.	-5 years.	-15 years.	-45 years.	+45 years.	Total.	
1934 ...	33	44	122	189	388	26	26	39	109	200	588
1935 ...	42	42	98	143	325	25	12	25	91	153	478
1936 ...	37	40	125	201	403	40	17	29	135	221	624
1937 ...	46	38	125	200	409	22	24	41	103	190	599
1938 ...	41	46	140	204	431	24	16	50	118	208	639

Deaths in Hospitals, Nursing Homes and other Institutions.—

Details of the deaths in Glasgow institutions are given in Appendix Table X, which shows that more than half (53.1 per cent.) of the total deaths registered occurred in such institutions. The proportion for the previous year was 53.2 per cent. Of the total 7,974 deaths, 3,514 occurred in local authority general hospitals and poorhouses, 1,662 in fever hospitals and sanatoria, and 221 in mental hospitals; altogether more than two-thirds of the total deaths in institutions. In voluntary hospitals and infirmaries, 2,296 deaths occurred, and 281 in nursing homes. The largest number of deaths occurred from heart disease, 1,250 followed by cancer, 789; pneumonia, 759; and pulmonary tuberculosis, 584.

SECTION III.

MATERNITY AND CHILD WELFARE.

INTRODUCTION.

Vital Statistics.—The infant death rate for 1938 was the lowest recorded for the city. The number of infant deaths, after correction for transfers, was 1,919 compared with 2,313 for the preceding year, a reduction of 394. The infant mortality rate was 87 per thousand births, compared with 104 for 1937 and 109 for 1936. In 1923, a rate of 89 occurred when the city was comparatively free from serious epidemics of infectious disease in infants. On that occasion, both the year before and the year after had high rates of 120 and 119 respectively, the former due to measles and pneumonia and the latter to whooping-cough and pneumonia.

In 1938, however, the infant mortality fell in spite of an epidemic of measles during the first part of the year and a considerable prevalence of whooping-cough during the second half. The infections of infancy were much less severe than usual, while there was also a decline in the deaths due to "immaturity." The causes of death are given in Tables XIII and XIV in the Appendix. They show the improved experience of the city in 1938 in respect of the "immaturity" group of conditions, respiratory diseases and affections of the digestive system.

INFANT MORTALITY.

The following tables show (1) the infant death-rates in Glasgow since 1891; (2) the rates in other large towns; and (3) the death-rates among legitimate and illegitimate children per 1,000 births in each group:—

GLASGOW—INFANT DEATH-RATE DURING SEVERAL PERIODS.

				Per 1,000.		Per 1,000.	
Average of 10 years, 1891-1900	...	149	1930	...	...	101	
" 10 " 1901-1910	...	135	1931	...	...	105	
" 5 " 1911-1915	...	134	1932	...	...	112	
" 5 " 1916-1920	...	115	1933	...	...	96	
" 5 " 1921-1925	...	107	1934	...	...	98	
1926 ... ..	...	104	1935	...	...	98	
1927 ... ..	...	107	1936	...	...	109	
1928 ... ..	...	104	1937	...	...	104	
1929 ... ..	...	107	1938	...	...	87	

COMPARISON WITH SEVERAL LARGE TOWNS.

				1935.	1936.	1937.	1938.
GLASGOW	...	...	...	98	109	104	87
Edinburgh	...	...	...	70	68	70	61
Dundee	...	...	...	68	81	87	77
Aberdeen	...	...	...	91	70	72	71
London	...	...	...	58	66	60	57
Liverpool	...	...	...	83	75	82	73
Manchester	...	...	...	71	77	76	69
Birmingham	...	...	...	64	62	60	61

Illegitimate Mortality.—The mortality of illegitimate children compared with others is shown in the following table, since the beginning of the present century. It will be observed that there has been a marked fall in the numbers since 1932, although the rate for 1938 is a little higher than those recently obtaining.

GLASGOW—DEATH-RATE PER 1,000 LEGITIMATE AND ILLEGITIMATE BIRTHS.

		Legiti- mate.	Illegiti- mate.			Legiti- mate.	Illegiti- mate.
1899-1900	...	144	286	1930	...	91	146
1901-1910	...	126	257	1931	...	99	173
1911-1915	...	127	217	1932	...	101	169
1916-1920	...	110	175	1933	...	95	127
1921-1925	...	103	169	1934	...	97	112
1926 ...	...	101	157	1935	...	96	112
1927 ...	...	105	147	1936	...	101	129
1928 ...	...	102	176	1937	...	97	135
1929 ...	...	103	165	1938	...	84	139

Causes of Infant Mortality.—The causes of infant mortality according to sex and for each month during the first year of life are given in Appendix Tables XIII and XIV. The proportion of deaths occurring in the first month was 40 per cent. for males and 42 per cent. for females, compared with 39 for males and 48 for females for the preceding year. The mortality in the early weeks of life is largely due to congenital causes and diseases of early infancy which now form more than one-third of the total infant mortality rate. The mortality of male infants was 32 per cent. in excess of the rate for females.

Rate per 1,000 Births.

MALES—

Causes of Death.		1911-15	1916-20	1921-25	1926-30	1931-35	1936	1937	1938
I.	Immaturity ...	46	46	40	43	43	46	46	42
II.	Diseases of Respiratory System ...	30	27	30	32	30	29	28	22
III.	Diseases of Digestive System ...	23	18	15	15	17	24	20	17
IV.	Diseases of Nervous System ...	—	8	7	6	4	4	4	4
V.	Tuberculous Diseases	6	3	3	2	1	2	1	1
VI.	Infectious Diseases	18	11	15	14	12	9	7	7
VII.	Suffocation ...	1	—	—	—	—	—	—	—
VIII.	All other causes ...	12	10	9	7	7	7	8	6
All causes ...		146	123	119	119	115	121	114	99

Rate per 1,000 Births.

FEMALES—

Causes of Death.		1911-15	1916-20	1921-25	1926-30	1931-35	1936	1937	1938
I.	Immaturity ...	36	36	32	33	33	36	38	31
II.	Diseases of Respiratory System ...	24	21	22	24	23	25	24	20
III.	Diseases of Digestive System ...	19	14	10	11	12	17	14	10
IV.	Diseases of Nervous System ...	8	6	5	4	3	5	2	3
V.	Tuberculous Diseases	4	3	2	2	1	1	1	1
VI.	Infectious Diseases ...	18	11	14	12	11	7	9	6
VII.	Suffocation ...	1	—	1	—	—	1	—	—
VIII.	All other causes ...	9	9	7	6	5	5	6	4
All causes ...		119	100	93	92	88	97	94	75

Ratio—Males to 100 Females 123 123 128 128 131 125 121 132

The number of deaths caused by congenital malformations (72 males and 62 females), was practically the same as for 1937, while deaths due to debility, etc., numbered 85 for males and 49 for females, compared with the respective figures of 80 and 72 for the previous year. There was a considerable reduction in the number of deaths from prematurity, those of male infants (236) being 55 fewer than in 1937, those of female infants (179) being 32 fewer. These reductions are responsible for a decline in the deaths per thousand births in the immaturity group of diseases from 46 in 1937 to 42 for males, the respective rates being 38 and 31 for females.

There was also a considerable reduction in deaths from diseases of the respiratory system. Those of the male infants numbered 244, compared with 311 in 1937, while the corresponding figures for female infants were 213 and 255. The infant mortality rate for males was 22 against

28 for the previous year and is the lowest recorded for this cause. In the case of females the rate was 20 compared with 24 in 1937, but, notwithstanding this definite reduction, the female rate is higher than it was in 1933 (18) and in 1931 (15). The death rate among infants from digestive diseases was also lower this year, the male deaths (191) being fewer by 37, while the respective figures for females were 43 and 107. In this group diarrhoea is the predominant cause ; it is usually associated with dry and warm weather during the autumn months. The weather conditions in 1938 would appear to have been favourable to a lower prevalence of diarrhoeal affections.

Mortality from disease of the nervous system has remained uniformly steady during the past five or six years, while the death rate caused by tuberculous diseases has been low over an even longer period.

A satisfactory feature of the infant mortality is that the rate due to infectious diseases has remained comparatively low during the past four years. The death rate per thousand births was 7 for males and 6 for females, compared with the respective rates of 7 and 9 for the preceding year. In 1934 the rate for each was 13 per thousand births. Some part of this improvement is probably due to the spreading out of the population in housing schemes and the reduction in the size of families. The most fatal infectious diseases were measles and whooping-cough, the former causing 43 male and 31 female deaths, and the latter 20 and 21 respectively.

To summarise, there were 1,112 deaths of male and 807 deaths of female infants compared with 1,293 and 1,020 respectively for the previous year. The infant mortality rate was 99 for males and 75 for females.

Infant Mortality in Wards.—The infant mortality rate for the city is now little more than half that obtaining in the nineties of last century, very high rates having prevailed in the old closely built "Sanitary Districts." Accurate comparisons cannot be made with these districts because the present wards have in most cases quite different boundaries.

The following table compares the infant mortality rates of 1938 with those of 1903, the first year in which the municipal wards were adopted for statistical purposes.

	1903	1938
Calton	183	113
Exchange (formerly Blackfriars partly), ...	183	131
Blythswood (formerly Broomielaw partly), ...	199	115
Cowcaddens (now enlarged)	194	83

This table gives some idea of the reduction in infant death rates in congested areas during the past twenty-five years.

Districts that were formerly purely residential, such as Kelvinside and Cathcart, now contain a considerable working class population, so that exceptionally low infant mortality rates such as 24 in Kelvinside and 28 in Cathcart as recently as 1934 are absent from the ward rates of the present year. There is now less disparity in the ward rates and considerable areas of the city have infant mortality rates of between 40 and 60, as shown in Appendix table XII.

The highest rate, 131, was recorded in Exchange in the centre of the city where much of the ward is occupied by business premises and most of the population is confined to a small, densely populated part where the housing conditions are unsatisfactory. The Maternity Hospital is also situated in this district. Apart from this, the highest infant mortality was 120 in Dalmarnock ward; other wards with high rates were Mile-end, 116; Blythwood, 115; while Calton, Sandyford, Woodside, Gorbals and Govan are the remaining wards with rates over 100. The lowest rates were 47 in North Kelvin and Partick West, followed by 48 in Cathcart and 49 in Pollokshields.

NOTIFICATION OF BIRTHS.

The number of notifications of births received during 1938 is shown in Appendix Table XV., compared with the corresponding figures for the two preceding years.

Nature of Attendance at Births.—The proportion of births medically attended fell from 48·6 per cent. in 1914 to 40·1 in 1925. Since then it has increased, and in 1938 the proportion was 54·0.

Still-Births.—The number of still-births known to occur in Glasgow usually averages about 4 per cent. of the total births. During 1938 there were 990 still-births, equal to a rate of 4·2 per cent. Of the medically attended births there were 179 still-births among home cases, representing a rate of 3·6 and 533 in institutions, equal to a rate of 7·2. Together, the rate indicated is 5·7. Among non-medically attended births there were 278 which is equivalent to a rate of 2·6.

Registration of Still-Births.—The Registration of Still-Births (Scotland) Act, 1938, brought still-births within the provisions of Section 15 of the Public Health (Scotland) Act, 1897. Registrars will include these births in their returns to the Department as from the beginning of 1939.

CHILD WELFARE SCHEME.

Various additions to the scheme of welfare centres are in progress. The new Gorbals clinic, opened during 1937, has functioned to capacity, the numbers now attending the various clinics there and in other populous districts being so large that it has been necessary to increase the number of sessions. A new centre is being erected at Sandy Road in the Partick district. A site at Seaward Street has been obtained for the erection of a centre for Kingston to replace that at Weir Street. The premises used at Govan Town Hall will be replaced by the erection of a new building on a site immediately to the west. The centre at Cowcaddens will also be replaced, while new centres have been approved for Possilpark and Pollokshaws.

To undertake the increased work, an additional assistant Child Welfare Medical Officer has been added to the staff, along with six additional Health Visitors.

WORK OF THE MATERNITY AND CHILD WELFARE CENTRES.

The number of centres remains the same as for the preceding year. The number of weekly sessions at the fourteen centres remains unchanged at 87 (26 ante-natal, 55 child welfare, and 6 ultra-violet ray treatment). In addition to these, clinics were conducted at the Elderpark Welfare Centre and at the Royal Maternity Hospital.

LIST OF MATERNITY AND CHILD WELFARE CLINICS.

	9 a.m.	1.30 p.m.
MONDAY,	15 Glenbarr Street, Provan. 106 Orr Street. 150 Wellshot Road, Shettleston. 26 Florence Street (— 1 year). 2 Summertown Road, Govan (Ante-natal). 20 Arklet Road, Elder Park (Ante-natal). 33 Richard Street (Ante-natal). 1 Burgh Hall Street, Partick (— 1 year).	15 Glenbarr Street, Provan (Ante-natal). 20 Cochrane Street (Ultra-Violet Ray). 33 Richard Street. 1 Burgh Hall Street, Partick (Ante-natal). 60 Avenuepark Street. 106 Orr Street. 150 Wellshot Road, Shettleston (Ante-natal). 26 Florence Street (— 1 year). 2 Summertown Road, Govan (Ultra-Violet Ray). 614 Dobbie's Loan (Ante-natal).
TUESDAY,	33 Richard Street (1-5 years). 194 Fernbank Street, Springburn. 60 Avenuepark Street (Ante-natal). 150 Wellshot Road, Shettleston. 15 Glenbarr Street, Provan. 2 Summertown Road, Govan. 106 Orr Street. 26 Florence Street. 614 Dobbie's Loan.	33 Richard Street (Ante-natal). 1 Burgh Hall Street, Partick (— 1 year). 614 Dobbie's Loan (Ante-natal). 2 Summertown Road, Govan. 106 Orr Street. 150 Wellshot Road, Shettleston. 26 Florence Street (Ante-natal). 20 Arklet Road, Elder Park (Ante-natal). 194 Fernbank Street, Springburn.

WEDNESDAY, 20 Cochrane Street (Ultra-Violet Ray).

33 Richard Street (—1 year).

60 Avenuepark Street.

614 Dobbie's Loan.

18 Plean Street, Blawarthill (1-5 years).

106 Orr Street (Ante-natal).

26 Florence Street (1-5 years).

132 Weir Street.

2 Summertown Road, Govan (Ultra-Violet Ray).

150 Wellshot Road, Shettleston.

15 Glenbarr Street, Provan.

18 Plean Street, Blawarthill (Ante-natal).

194 Fernbank Street, Springburn (Ante-natal).

106 Orr Street.

26 Florence Street (Ante-natal).

2 Summertown Road, Govan.

132 Weir Street.

THURSDAY, 614 Dobbie's Loan.

106 Orr Street (Ante-natal).

15 Glenbarr Street (Ante-natal).

26 Florence Street (1-5 years).

132 Weir Street.

33 Richard Street (—1 year).

2 Summertown Road, Govan (Ante-natal).

194 Fernbank Street, Springburn.

20 Cochrane Street.

1 Burgh Hall Street, Partick (1-5 years).

60 Avenuepark Street (Ante-natal).

614 Dobbie's Loan.

106 Orr Street.

150 Wellshot Road, Shettleston (Ante-natal).

26 Florence Street (—1 year).

132 Weir Street.

2 Summertown Road, Govan (Ante-natal).

FRIDAY, 18 Plean Street, Blawarthill (—1 year).

194 Fernbank Street, Springburn (Ante-natal).

614 Dobbie's Loan (Ante-natal).

60 Avenuepark Street.

106 Orr Street (Ante-natal).

150 Wellshot Road, Shettleston.

26 Florence Street (1-5 years).

2 Summertown Road, Govan.

20 Cochrane Street.

15 Glenbarr Street, Provan.

20 Cochrane Street (Ultra-Violet Ray).

614 Dobbie's Loan.

106 Orr Street.

2 Summertown Road, Govan (Ultra-Violet Ray).

20 Arklet Road, Elder Park.

26 Florence Street (Ante-natal).

15 Glenbarr Street, Provan.

Everpark Infant Consultations—Monday, Wednesday, and Thursday, at 1.30 p.m.

Maternity Hospital Ante-Natal Clinics—Daily, Monday to Friday, at 1.30 p.m., Saturday, 9.30 a.m. —1 year Clinics, Monday, Wednesday, and Friday, 9 a.m. Vaccination is also done at 20 Cochrane Street on Tuesdays at 12.30 p.m.

The total number of attendances at the infant consultations during 1938 was 200,197, compared with 177,627 during 1937. The primary attendances of infants were 9,983, compared with 9,634 during the preceding year. The number of consultations held during 1938 was 2,941, compared with 2,856 for the preceding year. For every primary attendance there were 16 subsequent attendances.

The following table gives the attendance at each consultation centre during the years 1937 and 1938 :—

ATTENDANCES AT INFANT CONSULTATIONS, 1938.

	No. of Con- sulta- tions held.	Children—1 year.		Children + 1 year.		Total		1937—Total	
		No. of Attendances.		No. of Attendances.		No. of Attendances.		No. of Attendances.	
		Prim.	Sub.	Prim.	Sub.	Prim.	Sub.	Prim.	Sub.
Gorbals ...	352	1,650	15,872	331	14,102	1,981	29,974	1,758	24,681
Cowcaddens ...	258	928	7,805	172	7,035	1,100	14,840	906	13,715
Elder Park ...	200	618	6,023	122	5,020	740	11,043	730	10,513
Provan ...	252	742	8,991	148	6,343	890	15,334	921	13,114
Govan ...	208	562	6,297	72	4,691	634	10,988	684	10,074
Orr Street ...	350	1,413	15,897	206	11,456	1,619	27,353	1,560	23,816
Maryhill ...	150	660	7,341	100	4,311	760	11,652	703	10,114
Partick ...	151	400	4,169	73	2,755	473	6,924	416	6,220
Richard Street	202	489	6,272	94	4,513	583	10,785	576	9,811
Shettleston ...	254	860	11,341	148	7,231	1,008	18,572	1,023	17,304
Weir Street ...	208	446	5,881	79	4,217	525	10,098	504	8,441
Cochrane Street	96	241	2,788	90	3,030	331	5,818	323	4,551
Springburn	156	638	6,671	64	3,725	702	10,396	730	8,926
Blawarthill	104	336	2,866	75	1,797	411	4,663	431	4,844
	2,941	9,983	108,214	1,774	80,226	11,757	188,440	11,265	166,331
		118,197		82,000		200,197		177,627	

SUPPLY OF MILK TO NECESSITOUS MOTHERS AND CHILDREN.

The arrangements for supplying milk to expectant and nursing mothers and to children up to five years of age were continued on the same lines as for previous years. Grants are subject to the following conditions :—

- (1) Regular attendance at a child welfare centre ;
- (2) Certification by the medical officer at the centre that milk is required on grounds of health ; and
- (3) Necessity according to a scale approved by the Corporation.

Except where conditions of health require a more frequent attendance, infants are not expected to be brought more often to the centres than once a fortnight and toddlers once in six weeks. Investigations as to the necessitousness of applicants are made on behalf of the Department by the Public Assistance Department. The period for which supplies are granted is six weeks at a time, during which one pint of fresh milk per day or one packet of dried milk per week is allowed.

The following tables summarize the applications and grants for the year 1938 :—

				Fresh Milk.	Dried Milk.	Together.
Applications granted	...	...	...	40,039	5,510	45,549
Applications refused as income over scale	...	...	...	1,410	259	1,669
				<u>41,449</u>	<u>5,769</u>	<u>47,218</u>
<i>Applications Granted—</i>						
Nursing and Expectant Mothers	...		...	7,531	1,505	9,036
Children under 1 year	...	...	...	9,581	2,611	12,192
Children aged 1-5 years	...		...	22,927	1,394	24,321
				<u>40,039</u>	<u>5,510</u>	<u>45,549</u>

The number of persons supplied under the scheme, the total quantities supplied, and the cost involved are shown below :—

No. of Persons supplied*	Fresh Milk. (Tuberculin Tested, Pasteurised)		Dried Milk. (Ostermilk and "Cow & Gate")	
	Mothers.	Children.	Mothers.	Children.
...	2,986	7,969	668	1,100
Total Quantity supplied	306,428 pts.	1,318,860 pts.	8202 pkts.†	23,344 pkts.
Total Cost	£3,881	£16,705	£512	£1,459
Maximum Daily No. of Persons supplied	4,893		679	
Minimum Daily No. of Persons supplied	4,037		553	
Average Daily No. of Persons supplied	4,453		626	

*113 Mothers and 304 Children were supplied with fresh milk for a part of the year and dried milk for another part of the year. These are included in the figures shown above for persons supplied with fresh milk and excluded from the figures for dried milk.

† Quantity in each packet=18 ozs. approximately.

In addition to the above, 30,391 packets of Dried Milk were supplied at cost price to mothers and children where the family income was above the scale of necessity. Dietary supplements as shown below were also issued from the Centres :—

	Lbs.	Cost.
Cod Liver Oil	10,648	£797
Cod Liver Oil Emulsion	18,376	763
Parrish's Chemical Food	2,940	220
Sundries	355	25
	<u>32,319</u>	<u>£1,805</u>

Certificates for free grants for fresh and dried milk were given by the medical officers at the Centres for the following reasons :—

					Nursing and Expectant Mothers.	Children.		Total.
						—1 year.	—5 years.	
Debility ... ..	...	...	...	...	823	111	127	1,061
Progressing ... ..	...	...	...	...	—	408	321	729
Insufficiency of Breast Milk ...	...	...	...	...	8,148	—	—	8,148
Child Losing Weight ... ..	...	...	...	...	—	27	125	152
Child under Weight ... ..	...	...	...	...	—	11,394	22,860	34,254
Child's Weight Stationary ... ..	...	...	...	...	—	19	90	109
Malnutrition ... ..	...	...	...	...	—	19	21	40
Marasmus ... ..	...	...	...	...	—	2	—	2
<i>Debility after—</i>								
Infectious Diseases ... ..	...	...	...	...	—	24	97	121
Other Diseases ... ..	...	...	...	...	3	60	102	165
<i>Infectious Diseases—</i>								
Measles ... ..	...	...	...	...	—	11	27	38
Whooping Cough ... ..	...	...	...	...	—	4	18	22
Chickenpox ... ..	...	...	...	...	—	1	4	5
<i>General Diseases—</i>								
Anaemia ... ..	...	...	...	...	43	19	28	90
Rickets ... ..	...	...	...	...	—	56	418	474
<i>Diseases of the Respiratory System—</i>								
Bronchitis ... ..	...	...	...	...	2	27	71	100
Pneumonia ... ..	...	...	...	...	—	8	11	19
<i>Others—</i>								
Enteritis ... ..	...	...	...	...	—	2	1	3
Albuminuria ... ..	...	...	...	...	17	—	—	17
Influenza ... ..	...	...	...	...	—	—	—	—
Totals ... ..	...	...	...	...	9,036	12,192	24,321	45,549

SOCIAL AND EDUCATIONAL WORK.

During the winter months a considerable amount of social and educational work has been carried on at the child welfare centres. A brief summary of the various classes held is given below. A special feature of the year's work has been the extension of the Keep Fit classes for mothers. These classes have proved most popular and there is no doubt that the mothers have benefited greatly from the special exercises arranged for them. The Department is greatly indebted to the Glasgow Keep Fit Movement, who supplied the instructresses, all of whom gave their services in a voluntary capacity.

In these various social activities the Glasgow Voluntary Visitors' Association play a prominent part and their continued interest is of great value in promoting the efficiency of the centres.

SOCIAL ACTIVITIES.

Centre	Nature of Class.	Period.	Day and Hours.	Average Attendance.
McCaddens	Play Centre	Nov. to Mar.	Mon., 6 p.m.	30
Do.	Keep Fit Class	Jan. to April	Mon., 7 p.m.	30
Artick	Sewing Class	Oct. to Mar.	Wed., 7.30 p.m.	35
Andersonston	Mother's Club	Oct. to Mar.	Each alternate Thurs., 2 p.m.	80
Do.	Keep Fit Class	Oct. to Mar.	Mon., 7 p.m.	25
Arnyhill	Sewing Class	Oct. to Mar.	Tues., 7 p.m.	40
Ringburn	Mother's Club	Oct. to Mar.	Mon., 7.30 p.m.	45
Settleston	Sewing Class	Oct. to Mar.	Wed., 7 p.m.	40
Do.	Keep Fit Class	Oct. to Mar.	Wed., 7 p.m.	60
Do.	Thrift Club	Oct. to Mar.	Wed., 7 p.m.	110
Edgeton	Mother's Instruction Class	Oct. to Mar.	Tues., 7 p.m.	40
Do.	Keep Fit Class	Oct. to Mar.	Tues., 7 p.m.	40
Do.	Barbola Class	Oct. to Mar.	Tues., 7 p.m.	10
Van Town Hall	Mother's Club	Oct. to Mar.	Thurs., 7 p.m.	45
Do.	Sewing Class	Oct. to Mar.	Every alternate Wed., 7 p.m.	28
Orbals	Mother's Club	Oct. to Mar.	Tues., 7 p.m.	90
Do.	Keep Fit Class	Dec. to Mar.	Thurs. 7.30 p.m.	20

Teaching of Mothercraft.—During the past year there has been still further development of the teaching of mothercraft. An additional Health Visitor has been appointed to carry out this work at the ante-natal and infant welfare clinics. There are now two whole-time Health Visitors whose time is entirely devoted to this branch of the work. This teaching is a valuable addition to the group teaching carried out by the Medical Officers and Health Visitors at the clinics, and is specially directed to the young mother in attendance at the ante-natal clinic.

The scheme whereby, at certain of the centres, classes of senior girls from the elementary schools are conducted, has been continued throughout the year. There is evidence of an increasing interest on the part of the scholars in this instruction in the care and management of the young infant, and it is impossible to undertake the teaching of more than a small number of the pupils who desire to attend the classes.

"Health of Mother and Child" Booklet.—A booklet entitled "Mother and Child," first published in 1932 by the Department, was reissued by the Department of Health for Scotland in collaboration with the Maternity and Child Welfare Department of the Corporation. The booklet, now of quarto size, extends to 75 pages, and contains in simple language, advice and instructions for the expectant and nursing mother, on the care and upbringing of a child, and contains detailed instructions as to feeding from birth until the end of the fifth year. It is sold to mothers at the

child welfare clinics at the nominal sum of twopence per copy, but by arrangement with the Department of Health, supplies have been sold at cost price to other Local Authorities. Altogether, 14,127 copies of the new issue were disposed of up to the end of 1938, 7,839 of these being sold to other Local Authorities, leaving a balance of 6,288 distributed in Glasgow. Of this latter number, 1,315 were sold at the Empire Exhibition.

For the Empire Exhibition the Department fitted up a health exhibit in the Scottish Pavilion (North). It was decided to devote the space to a display of special photographs and models illustrative of birth and growth, portraying the development of the child from birth to the close of school life. The whole exhibit was designed to show the various public health activities which have a direct or indirect bearing on the promotion of health during the growing period of life. Sections were also devoted to orthopaedics, infectious diseases, the laboratory service and pestology.

ANTE-NATAL CONSULTATIONS.

Glasgow Royal Maternity Hospital.—The total number of cases attending the ante-natal dispensary for the first time was 4,041 during 1938, compared with 4,131 in 1937, while the total attendances during the respective years were 19,374 and 18,164. During 1938, 2,884 cases were treated to a termination in delivery, of which 967 were attended in their own homes.

The number admitted to the ante-natal wards during 1938 was 1,457, compared with 1,574 in 1937.

At the infant consultations held at the Maternity Hospital there were 5,170 attendances, as compared with 4,278 during the previous year. The first attendances numbered 460.

ANTE-NATAL DISPENSARY—				1936	1937	1938
Number attending for first time	...	...	...	4,324	4,131	4,041
Total attendances	...	...	...	17,976	18,164	19,374
Number treated to a termination	...	...	...	2,724	2,811	2,884
Number sent to Hospital—						
(a) For confinement	...	...	...	1,250	1,380	1,381
(b) For miscarriage	...	...	...	62	59	59
(c) For ante-natal treatment	...	...	...	538	561	490
(d) For ante-natal treatment and confinement	...	...	...	366	452	451
(e) For ante-natal treatment and miscarriage	...	...	...	36	23	26
Number treated on District—						
(a) For confinement	...	...	...	999	891	956
(b) For miscarriage	...	...	...	11	6	11

	1936	1937	1938
ANTE-NATAL WARDS—			
Average number under treatment ...	43	46	43
Number admitted ...	1,475	1,574	1,457
Total days ...	15,785	16,076	15,604
Condition on dismissal—			
(1) Recovered ...	149	307	315
(2) Improved ...	197	273	253
(3) Transferred to Labour Ward for confinement ...	981	800	767
(4) Died ...	8	5	2
(5) No change ...	135	117	77
INFANT CONSULTATION—			
First attendance ...	506	424	460
Subsequent attendances ...	4,749	3,854	4,710
Total ...	<u>5,255</u>	<u>4,278</u>	<u>5,170</u>

Corporation Ante-Natal Clinics.—The total number of sessions at ante-natal clinics was 1,308 during 1938, compared with 1,317 for the preceding year. The total attendances have again increased, 51,236 being recorded, compared with 47,330 in 1937; the primary attendances were 9,150, or 312 more than in the previous year and subsequent attendances numbered 42,086, an increase of 3,594 attendances. The numbers of consultations and attendances at each of the centres are shown in the following table.

ATTENDANCES AT ANTE-NATAL CLINICS, 1938.

				No. of Clinic. Sessions.	No. of Attendances.		
					Primary.	S'sequent.	Total.
Partick	...	...	...	46	356	1,398	1,754
Cowcaddens	...	...	...	150	678	2,953	3,631
Maryhill	...	...	...	104	575	2,876	3,451
Springburn	...	...	...	104	586	2,810	3,396
Bridgeton	...	...	...	156	1,167	6,076	7,243
Shettleston	...	...	...	98	715	3,581	4,296
Gorbals	...	...	...	154	1,822	8,171	9,993
Govan	...	...	...	150	1,115	4,660	5,775
Elderpark	...	...	...	98	581	3,074	3,655
Anderston	...	...	...	98	620	2,545	3,165
Blawarthill	...	...	...	52	288	1,173	1,461
Provan	...	...	...	98	647	2,769	3,416
				<hr/>	<hr/>	<hr/>	<hr/>
				1,308	9,150	42,086	51,236

The following table shows the age of mothers who attended :—

Ages of Mothers								Totals.	
								1937.	1938.
—20 ...	...	...	...	...	...	...	...	490	505
—25 ...	...	...	...	...	...	...	...	2,477	2,315
—30 ...	...	...	...	...	...	...	...	2,620	2,843
—35 ...	...	...	...	...	...	...	...	1,799	1,962
—40 ...	...	...	...	...	...	...	...	1,003	1,053
—45 ...	...	...	...	...	...	...	...	274	305
+45 ...	...	...	...	...	...	...	...	12	11
Not pregnant	...	...	...	...	...	...	...	163	156
								<u>8,838</u>	<u>9,150</u>

The conditions found on medical examination are enumerated in the following statement, but, as in many cases, two or three causes of illness were present, the total number of conditions is much in excess of the number of mothers. The most frequent conditions requiring attention were those of dental disease, the alimentary system (including constipation), general debility, varicose veins, and albuminuria.

CONDITIONS FOUND DURING PREGNANCY.

								Totals.	
								1937	1938
Nothing Abnormal Discovered	...	...	...	...	...	...	...	—	1,249
Albuminuria	...	...	...	...	...	...	...	1,639	1,586
Albuminuria and Pyuria	...	...	...	...	...	...	...	15	16
Alimentary Conditions	...	...	...	...	...	...	...	1,184	1,644
Anaemia	...	...	...	...	...	...	...	565	584
Cardiac Disease	...	...	...	...	...	...	...	136	160
Chorea	...	...	...	...	...	...	...	1	2
Debility	...	...	...	...	...	...	...	761	667
Dental Disease	...	...	...	...	...	...	...	2,537	2,679
Hyperemesis	...	...	...	...	...	...	...	17	16
Oedema	...	...	...	...	...	...	...	96	165
Pyelitis	...	...	...	...	...	...	...	27	25
Respiratory	...	...	...	...	...	...	...	314	270
Rheumatism	...	...	...	...	...	...	...	20	17
Varicose Veins	...	...	...	...	...	...	...	716	945
Venereal Disease	...	...	...	...	...	...	...	99	97
Other Conditions	...	...	...	...	...	...	...	439	472
Total	...	...	...	...	...	...	...	<u>8,566</u>	<u>10,594</u>

OBSTETRIC CONDITIONS.

						Totals.	
						1937	1938
Nothing Abnormal Discovered	...	...	...	...	...	—	4,960
Ante-Partum Haemorrhage	...	...	...	...	...	39	44
Contracted Pelvis	...	...	...	...	...	214	197
Hydramnios	...	...	...	...	...	21	16
Malpresentation—							
(a) Corrected	...	...	...	...	...	177	245
(b) Persistent	...	...	...	...	...	100	51
Multiple Pregnancy	...	...	...	...	...	81	95
Threatened Abortion and Miscarriage	...	...	...	...	...	109	90
Threatened Premature Labour	...	...	...	...	...	52	24
Other Conditions	...	...	...	...	...	38	52
Total	...	...	...	...	...	831	5,774

Of the total cases examined during the year (9,150), there were 159 found not to be pregnant. Among the others, 1,778 were primiparous and 7,213 multiparous, or 19 and 79 per cent. respectively.

The results, so far as known, as to whether delivery resulted at full term, prematurely, etc., are here given, together with the number of still-births:—

CASES TERMINATED DURING 1938.

					Previous Year's Cases.	This Year's Cases.	Total.
Alive—							
Full Term	...	...	...	...	2,051	5,917	7,968
Premature	...	...	...	...	95	286	381
Still Births—							
Full Term	...	...	...	...	56	193	249
Premature	...	...	...	...	17	80	97
Abortion or Miscarriage	...	...	...	...	18	105	123
Left district and not traced	...	...	...	...	36	98	134
Not pregnant	...	...	...	...	17	156	173
Died before termination	...	...	...	...	1	6	7
Not terminated	...	...	...	...	—	2,405	2,405
					2,291	9,246	11,537
Twin Births	...	...	...	...	30	94	124
Triplet Births	...	...	...	...	—	1	1

The following table shows the attendances at confinement :—

Number of patients delivered by :—							1937.	1938.
Midwife	...	...	...	...	...	...	1,720	1,527
General Practitioner	...	...	...	...	...	...	124	167
In Hospital	...	...	...	...	...	...	2,619	2,755
By Outdoor Staff	...	...	...	...	...	...	1,845	2,017
No attendance, Uncertified, etc.	...	...	...	...	...	...	12	19
							<u>6,320</u>	<u>6,485</u>

Among the 8,349 patients whose pregnancy terminated in 1938 (excluding abortions), 38 deaths occurred giving a death rate of 4·6 per 1000 births, compared with 3·7 for the year 1937. Of the 6 deaths from Puerperal septic conditions, 1 was associated with Pelvic Cellular Abscess and Toxaemia, 1 with Pelvic Lymphangitis, 2 with Phlegmasia Alba Dolens and Pulmonary Embolism, 1 with Caesarean Section for Contracted Pelvis and 1 death was certified as Puerperal Septicæmia only.

Other deaths among these patients were as follows :—

Puerperal Haemorrhage	...	...	...	...	...	...	3
Puerperal Albuminuria and Convulsions	...	...	...	...	...	...	1
Other Toxaemias of Pregnancy	...	...	...	...	...	...	3
Puerperal Phlegmasia Alba Dolens, Embolism and Sudden death	...	...	...	...	...	...	3
Other Accidents of Childbirth	...	...	...	...	...	...	6
Other or Unspecified Conditions of the Puerperal State	...	...	...	...	...	...	1
Influenza	...	...	...	...	...	...	1
Pulmonary Tuberculosis	...	...	...	...	...	...	2
Non-Pulmonary Tuberculosis	...	...	...	...	...	...	1
Cancer	...	...	...	...	...	...	1
Circulatory Diseases	...	...	...	...	...	...	4
Respiratory Diseases	...	...	...	...	...	...	1
Digestive Diseases	...	...	...	...	...	...	2
Other Diseases	...	...	...	...	...	...	3

Thus 15 deaths had probably little association with the puerperal state, although in some it may have been a contributing cause. Excluding these deaths, and comparing with a rate of 5·68 for the City as a whole, the maternal mortality may be more correctly stated as 2·8. As regards the ante-natal service, it may be pointed out that only 33 per cent. of pregnant women attending the clinics came before the sixth month, and 61 per cent. before the seventh month.

The number of still-births, 346, occurring among the pregnancies included in this analysis represents a rate of 4·2 per cent., compared with the average for the City of 4·2 per cent. The still-births among the cases which attended during the previous year amounted to 3·7 per cent.

A comparison of the births occurring at full time or otherwise shows that during 1933 premature births formed about 4·7 per cent. of the total, as compared with 5·1 per cent. for the previous year. Abortions equalled 1·5 per cent. of the pregnancies, compared with 1·6 for the preceding year.

The month of pregnancy at which the first attendance was made at the clinic is given below ; almost two-thirds attended by the seventh month :—

Month of Attendance.	Total.	Per Cent.
1	18	9
2	241	
3	599	
4	896	10
5	1,539	17
6	2,210	25
7	2,144	24
8	1,128	13
9	219	2
Not pregnant	156	—
	<u>9,150</u>	<u>100</u>

DENTAL TREATMENT FOR EXPECTANT MOTHERS.

The scheme approved by the Corporation in 1935 to provide dental treatment for necessitous and partly necessitous mothers in need of treatment has been continued throughout the year at Provan and Gorbals clinics. At the end of the year the staff of the clinics consisted of 2 dentists, 2 nurses, 5 dental mechanics and 3 apprentice dental mechanics.

The number of applications for treatment received during the year was 1,579. In 106 cases the family income was over the scale of necessity and the patients were referred elsewhere ; 12 applications were withdrawn by the patients ; 20 applications were not accepted for various reasons, such as failure to reply to letters, removal, etc. ; and at the end of the year 5 applications had not been completed. The remaining 1,436 cases were wholly or partly necessitous, as shown in the following list :—

	No.	Percentage.
Wholly necessitous—treatment to be provided free of cost to the patient ...	1,228	85·5
Partly necessitous—to pay one-fifth of the nominal cost ...	56	3·9
—to pay two-fifths ...	61	4·3
—to pay three-fifths ...	57	3·9
—to pay four-fifths ...	34	2·4
Total	<u>1,436</u>	

Five of the cases included above were chargeable to Approved Societies, generally to the extent of 50 per cent. of the nominal cost.

Of the above 1,436 cases, 88 had not attended for examination by the end of the year.

The following figures show the work done during the year at Provan and Gorbals clinics. Approximately 92 per cent. of the time at Provan clinic and 86 per cent. at Gorbals clinic was devoted to patients from the ante-natal clinics, the remainder of the time being spent in treating Public Assistance cases and school children.

	Provan.	Gorbals.	Total.
Primary attendances for examination and estimate	732	713	1,445
Primary attendances for treatment	597	541	1,138
Subsequent attendances for treatment	2,796	2,361	5,157
Attendances—no treatment given	54	35	89
Total attendances	<u>4,179</u>	<u>3,650</u>	<u>7,829</u>
Extractions	9,994	8,197	18,191
Fillings	3	29	32
Scalings (Patients)	12	16	28
Dressings	20	35	55
Full Upper Dentures completed	497	465	962
Full Lower Dentures completed	476	430	906
Partial Dentures completed	23	26	49
Other Dentures not yet completed	10	6	16
Repairs	3	3	6
Other Dental Operations (Patients' attendances)	1,301	1,236	2,537

As a general rule, extractions were completed ante-natally and dentures inserted post-natally. All extractions were executed under local anaesthesia.

The charges made in part payment cases ranged generally from 6/- to 24/- for an upper or lower denture (with any necessary extractions and other preparatory work), and from 12/- to 48/- for full dentures, also with any necessary preparatory work. The sums to be paid in individual cases were determined according to the scale of necessity approved by the Corporation. Half of the sum so determined was payable before the extractions or other preparatory work commenced, and the other half before the making of the dentures was put in hand.

MATERNAL MORTALITY.

Enquiry into maternal deaths has been continued as a routine procedure during the year. This practice was begun at the close of 1929 under arrangement made by the Department of Health and the British Medical Association.

The following statement showing the maternal mortality deaths and rates is from figures supplied by the Registrar-General :—

STATEMENT SHOWING MATERNAL DEATHS AND RATES PER 1,000 BIRTHS
IN GLASGOW AND SCOTLAND IN THE YEARS 1934-38.

	Deaths.					Rate per 1,000 Births.				
	1934.	1935.	1936.	1937.	1938.	1934.	1935.	1936.	1937.	1938.
Accidents of Pregnancy ...	4	9	9	9	6	0·18	0·40	0·40	0·40	0·27
Puerperal Haemorrhage ...	24	23	18	15	14	1·10	1·04	0·80	0·68	0·64
Puerperal Septicaemia, including Post-abortive sepsis ...	64	75	58	46	51	2·93	3·39	2·61	2·07	2·32
Oxaemia of Pregnancy, Albuminuria, Convulsions	13	22	25	21	24	0·60	1·00	1·12	0·95	1·09
Other Puerperal Diseases ...	27	26	21	19	30	1·24	1·18	0·94	0·86	1·36
Totals—Glasgow ...	132	155	131	110	125	6·05	7·01	5·87	4·96	5·68
Scotland ...	551	555	494	424	432	6·20	6·31	5·55	4·82	4·87

During the year 125 deaths occurred from maternal causes, equivalent to a rate of 5·68 per 1,000 births, which compares with a rate of 4·96 for the previous year.

MATERNAL MORTALITY ENQUIRY.

A medical enquiry is made in the case of every maternal death during each year. The information so obtained from midwives, doctors and hospitals, makes it possible to classify the deaths more accurately than from consideration of the death certificate only.

The maternal deaths in 1938 have been tabulated as follows :—

A. Deaths due to pregnancy and childbirth ...	120
B. Deaths due to associated conditions ...	40

A. Deaths due to pregnancy and childbirth.

(1) Not associated with a notifiable birth—

(a) abortion :

septic ...	30
non-septic ...	3

(b) ectopic gestation ...

Total ...	35
-----------	----

(2) Associated with a notifiable birth—

(a) sepsis :				
normal labour ...	...	...	...	7
abnormal labour ...	...	...	...	13
(b) toxæmia :				
eclamptic ...	...	...	...	9
non-eclamptic ...	...	...	...	16
(c) hæmorrhage :				
ante-partum ...	...	...	...	7
post-partum ...	...	...	...	6
(d) obstetric shock :				
normal labour ...	...	...	...	—
abnormal or difficult labour ...	...	...	...	12
(e) accidents of labour				
rupture of uterus ...	...	...	...	2
inversion of uterus ...	...	...	...	1
(f) embolism ...	...	...	...	7
(g) other causes ...	...	...	...	5
Total ...	...	...	...	<u>85</u>

B. Deaths due to associated causes.

Pneumonia ...	...	...	...	...	...	3
Heart Disease ...	...	...	...	...	...	18
Tuberculosis ...	...	...	...	...	...	10
Acute myeloid leukaemia ...	...	...	...	...	...	1
Meningococcal meningitis ...	...	...	...	...	...	1
Exophthalmic goitre ...	...	...	...	...	...	1
Carcinoma of pelvic colon ...	...	...	...	...	...	1
Hæmorrhage into supra-renal glands ...	...	...	...	...	...	1
Status epilepticus ...	...	...	...	...	...	1
Transverse myelitis ...	...	...	...	...	...	1
Burns ...	...	...	...	...	...	1
Multiple injuries ...	...	...	...	...	...	1
Total ...	...	...	...	...	...	<u>40</u>

The above classification gives an indication of the broad causes of death and separates those directly connected with pregnancy and child birth from those due to other unassociated causes.

ULTRA-VIOLET RAY CLINICS.

No alteration has taken place in the arrangements for light treatment of children suffering from rickets, malnutrition, etc.

The number of consultations held weekly at Cochrane Street and Govan Town Hall remain the same as at the end of last year.

The installation and the results of treatment have been fully dealt with in previous reports, so that only the records of numbers treated are here given in respect of 1938.

RECORD OF ATTENDANCES AND CONSULTATIONS DURING 1938.

	Number of Clinics held.	Children —1 year. Number of Attendances.		Children +1 year. Number of Attendances.		Mothers. Number of Attendances.		Total Number of Attendances.	
		Prim.	Sub.	Prim.	Sub.	Prim.	Sub.	Prim.	Sub.
Cochrane Street	... 147	56	515	531	11,361	12	82	599	11,958
Govan	... 148	33	188	247	5,966	9	131	289	6,285
	295	89	703	778	17,327	21	213	888	18,243
		792		18,105		234		19,131	

AGES OF CHILDREN ATTENDING FOR THE FIRST TIME—

	Cochrane Street.		Govan.	
—1 year	...	56	...	33
—2 years	...	325	...	127
—3 years	...	129	...	66
—4 years	...	46	...	26
—5 years	...	31	...	13
+5 years	...	—	...	15
		587		280

REASONS FOR TREATMENT OF CASES ATTENDING FOR FIRST TIME.

							Cochrane Street.	Govan.
CHILDREN—								
Rickets.	{	1. Prophylaxis	...	...	...	...	—	—
		2. Early Rickets	...	...	...	...	153	71
		3. Moderate Rickets	...	...	...	...	173	68
		4. Marked Rachitic deformity	...	...	...	...	68	39
Debility after acute illness		...	...	...	...	19	10	
Debility after infectious disease		...	...	...	...	—	9	
Debility—weight stationary, or losing, or not thriving							80	37
Bronchitis	...	...	...	...	...	...	44	22
Malnutrition	...	...	...	...	...	...	10	11
Marasmus	...	...	...	...	...	...	—	—
Nervous Instability		...	...	...	...	...	—	1
Skin Diseases	...	...	...	...	...	...	2	1
Cervical Adenitis	...	...	...	...	...	...	9	7
Others	...	...	...	...	...	...	29	4
							587	280
							587	280
MOTHERS—								
Pregnancy	...	...	...	...	...	...	12	8
Nursing Mothers	...	...	...	...	...	...	—	1
							599	289
							599	289

INFANT VISITATION.

Under the scheme of infant visitation every birth is visited if the notification does not state that a medical practitioner has been in attendance, and the following table shows the record of those visited, together with certain information obtained :—

	1936.	1937.	1938.
Inquiry cards returned	18,730	18,370	18,288
Full information obtained	18,251	17,997	17,969
Doctor found in attendance	9	5	—
Wrong address	—	—	—
Others	470	368	319
Inquiry cards issued	18,522	18,296	18,212

Of those for whom full information was obtained—

Legitimate	17,414	17,288	17,219
Illegitimate	651	646	687
<hr/>			
Born at full term	16,818	16,781	16,853
Premature births	1,247	1,153	1,053

Condition of Infant at Birth—

	1936.	1937.	1938.
Well nourished	15,033	14,978	15,278
Fairly nourished	1,482	1,449	1,233
Badly nourished	715	723	598
Still-born	835	784	797

Nature of Feeding at First Visit—

Breast	13,691	13,593	13,854
Artificial	2,576	2,495	2,414
Breast and Artificial	432	527	385
Still-born	835	784	797
Dead at First Visit	530	534	456
Adopted	1	1	—

VISITATION BY NURSES.

Altogether, the health visitors made 156,881 home visits during the year, compared with 121,665 during the preceding year. Of these totals, the respective numbers for infants under one year of age were 65,398 and 59,136. First visits numbered 18,748. In addition, 41,597 visits were made to houses in respect of toddlers, while 11,379 other toddlers were seen during the course of routine visitation of infants. Other visits were made for special enquiries, etc., as shown in the following table.

VISITS MADE BY NURSES.

	1937.	1938.
Infants under 1 year—Primary Visits ...	18,837	18,748
Infants under 1 year—Subsequent Visits	40,299	46,650
	<hr/> 59,136	<hr/> 65,398
Children 1-5 years	27,699	41,597
Children seen while visiting infants ...	8,196	11,379
Ophthalmia Neonatorum	6,092	6,666
Puerperal Fever	1,384	1,462
Maternal Deaths enquiries	315	239
Infant Deaths	2,038	229
Ante-natal Visits	4,939	5,643
Venereal Diseases	280	296
Light Treatment	1,163	1,063
Pneumonia	70	42
Other Visits	1,172	1,074
Houses Shut	17,377	21,793
	<hr/> 121,665	<hr/> 145,502

Infants or Children brought to Central Clinic for treatment, etc.—

Child Welfare	650	771
Venereal Diseases	97	87
Others	391	704
	<hr/> 1,138	<hr/> 1,562

In addition to home visitation, the nurses attend the Child Welfare and other consultations in their own districts. They thus have an opportunity of reporting to the doctor any illness or condition requiring medical treatment and following up cases afterwards to see that the treatment recommended is carried out.

CLINIC SESSIONS ATTENDED BY NURSES.

	1938.	1937.
Ante-natal	4,045	3,853
Infant Consultations	5,072	4,636
Venereal Diseases	442	449
Light Treatment	674	643
Dental	20	—
	<hr/> 10,253	<hr/> 9,581

The children found alive on the occasion of the first visit by the Health Visitor are classified in the following table under three groups:—

	Well.	Fair.	Bad.	Total.
1936	15,330	1,678	200	17,208
1937	15,163	1,500	214	16,877
1938	15,536	1,271	146	16,953

The following table is a summary of results found at final visit :—

			Still Good.	Much Im- proved.	Slightly Im- proved.	No Im- pr'ment.	Worse.	Total.
1936	...	...	5,004	143	—	2	—	5,149
1937	...	...	5,998	208	—	1	—	6,207
1938	...	...	6,792	19	2	1	—	6,814

GLASGOW INFANT HEALTH VISITORS' ASSOCIATION.

Working in association with the Public Health Department is the Glasgow Infant Health Visitors' Association, to whom are reported children whom it is desirable to keep under observation during a longer period than is possible by the official visitors. The number of visitors fluctuates around 300.

As the period of visitation generally extends over the first twelve months of life, a complete year must elapse before the results of the visitation can be summarised.

The following is a summary of the results for the years 1935-1937 :—

Year.	Year old.	Re- moved.	Dead.	Ceased to be visited.	Visits Un- necessary.	No Infor- mation.	Visits Re- sented.	No Visitor.	Total.
1935	...	1,636	207	121	4	5	—	1	1,975
1936	...	1,589	193	155	10	6	—	2	1,955
1937	...	1,571	151	145	10	2	—	—	1,879

As the result of a change of policy the original Glasgow Infant Health Visitors' Association has adopted a new name. The Association is now known as the Glasgow Voluntary Visitors' Association. The reason for the alteration is the fact that the Association is now devoting its main attention, so far as home visitation is concerned, to the children between one and five years of age, commonly known as the "toddler" group. There is little doubt that the arrangement will enable the activities of the Association to enter upon a still more valuable and useful phase of development. In recent years there has been an encouraging improvement in the mortality and general physical condition of these children, but further supervision is urgently needed. This extension of the work of the Association is confidently expected to help to fill what is everywhere recognised as a gap in our welfare organisation.

DOMESTIC HELPS.

Since the scheme for supplying Home Helps was inaugurated in Glasgow towards the end of 1924, there has been an increasing demand for their services. In the first year there were only 17 applications, while in 1938 the total reached was 170. The scale of payment is 5s. per day, which is guaranteed by the Corporation. Assistance of this kind for those who can pay this rate is arranged privately, and is not included in the records shown below. Quite a number are being placed in this way as the scheme becomes better known.

Payment for the services of helps is in accordance with a scheme of "necessitousness" based on the scale applicable to grants of milk and meals under the Child Welfare Scheme, with a minimum charge of 1s. per day. The following is a summary of the payments made for services rendered :—

				Cases. 1938.	Number of Days Attended. 1938.	Rate Per Day.	Amount Paid by Patients. 1938.
				75	1,261	1/-	£63 1 0
				25	309	1/6	23 3 6
				2	31	1/8	2 11 8
				18	208½	2/-	20 17 0
				27	377	2/6	47 2 6
				15	140	3/-	21 0 0
				4	30	3/6	5 5 0
				2	18	4/-	3 12 0
				1	5	4/6	1 2 6
				1	10	5/-	2 10 0
1938	...	...	...	<u>170</u>	<u>2,389½</u>		<u>£190 5 2</u>
1926-30 (Annual Average)	...			151	1,872		£141 3 0
1931	...	...	...	261	3,331		233 13 6
1932	...	...	...	249	3,346		219 2 6
1933	...	...	...	257	3,082½		204 2 0
1934	...	...	...	240	2,837		200 15 0
1935	...	...	...	212	2,996½		223 14 9
1936	...	...	...	228	3,105		235 4 3
1937	...	...	...	212	2,812		230 4 0

During 1938, 25 individual helps attended 170 cases for a total of 2,389½ days, or an average of 14 days per case. The amount paid in fees was £190 5s. 2d. The helps are remunerated at the rate of 5s. per day, so that the balance falling to be met by the Corporation was £407 2s. 4d.

MATERNITY BUNDLES.

In connection with the Child Welfare movement, a very definite need has been met by the issue of maternity bundles, and, in accordance with the practice of recent years, these are not issued until the birth actually takes place, as in necessitous cases to which they are issued, it was found that quite frequently the garments supplied were misused. In 1938 bundles or part bundles, to the number of 3,620 were supplied, compared with 2,851 in 1937, and 1,755 in 1936. Receipts from those who could make a part payment amounted to £45, as against £53 2s. 1d. received from this source during the preceding year.

DAY NURSERIES.

Including the Phoenix Park Nursery School, there are four Centres with nursery accommodation. The total attendances of children at these Centres during 1938 was 23,161, in comparison with 26,260 during the previous year.

The following figures show the number of attendances, etc., at each Centre during the year :—

Nursery.			Number of Days open.	Total Attendances during the year	Average.	Maximum number in one day.	Accommo- dation for.
Bridgeton	...	...	239	9,594	40	49	40
*Cowcaddens	...	...	227	5,790	26	37	36
Phoenix Park Kinder- garten	...	...	101	2,763	27	33	31
Kingston	...	...	217	5,014	23	31	30

*Closed for month of July and accommodated in temporary premises for other four months to allow carrying out of extension and reconditioning.

With regard to Phoenix Park Kindergarten, Miss Anderson, the Superintendent, says :—

“ The health of the children was good during the six months, January to June, 1938, except for an epidemic of measles in March.

Children were admitted for the following reasons :—

- (a) Health of child.
- (b) Child difficult to manage at home.
- (c) Mother working.

Other reasons frequently met with are—traffic dangers ; mother's health ; benefit that has been received by other members of the family or by neighbours' children, both physical and educational ; one or both parents former Nursery School children themselves.

Some of the children are recommended by a Public Health doctor or nurse, others are introduced by neighbours, and many apply themselves. Our four years' sojourn in Elgin Place Mission Hall came to an end in June. We were treated with much consideration there but the prospect of having our own premises again was a joyful one.

In the case of children who are a problem at home, we have found that the life of interest and activity and the companionship in the Nursery School, the improvement in health, and the powerful influence of public opinion in the little community, have all contributed towards inducing a more reasonable social attitude."

In the autumn of 1938, the new Phoenix Park Nursery School, which had been erected by the City Engineer for the Committee on Health, was transferred to the Education Committee to be conducted by that Committee as a Nursery School, in view of the fact that the provision of these schools is now a function of Education. At the same time, when the transfer was effected, it was arranged that the medical supervision of the children as well as the feeding should remain a function of the Child Welfare Department.

COURSE OF TRAINING AT DAY NURSERIES.

During the year, 71 pupils from the School of Domestic Science received a course of training, compared with 75 for the preceding year.

COUNTRY HOMES.

The extension of the Country Home at Mount Blow begun towards the end of 1936 was opened on 19th November, 1938. It consists of the provision of two new dormitories for children under five, while the main building has been remodelled for the accommodation of the increased staff required for the sixty children that the Home now accommodates. The covered playroom facilities have also been extended.

The new dormitories are constructed of wood on brick foundations, while the roof is covered with composition slates.

For some years past it has been customary during epidemic prevalence of children's diseases to select for admission those who had made imperfect recoveries. During recent epidemics of measles and whooping-cough, the Homes were devoted to children admitted direct from the infectious disease hospitals. In this way they act as adjuncts to the fever hospitals, providing convalescent accommodation for young children during an epidemic of measles, whooping-cough or pneumonia. This scheme has been of great benefit to the children, has assisted the accommodation in the hospitals in times of pressure, and has avoided the introduction of other infections into the Homes, as is apt to occur when young children are admitted direct from their homes in the city.

The following analysis shows that 318 children were admitted under the Child Welfare Scheme to the two Country Homes during the year, the two principal reasons for admission being rickets and malnutrition :—

	Scotstoun.	Mount Blow.	Total.
Rickets	1	3	4
General Malnutrition and Debility	56	51	107
Bronchitis	6	—	6
Paresis	1	—	1
Debility after acute illness	—	—	—
Anaemia	1	3	4
Nervousness	—	—	—
Others	—	—	—
Convalescent after Measles and Pneumonia	193	3	196
	<u>258</u>	<u>60</u>	<u>318</u>

The dismissals during the year were 262 from Scotstoun and 20 from Mount Blow. The condition on dismissal is summarised in the following statement :—

	Scotstoun.	Mount Blow.	Total.
Much improved	242	—	242
Not improved	—	—	—
Parents leaving City	—	—	—
Transferred suffering from infectious disease	7	5	12
Taken home by parents (Fretting, etc.) ...	6	—	6
Died	1	—	1
For admission to other Institutions	6	—	6
Sent home (Cough, Fretting)	—	2	2
Contacts with cases of Infectious Disease sent home	—	13	13
	<u>262</u>	<u>20</u>	<u>282</u>

MIDWIVES AND MATERNITY HOMES (SCOTLAND) ACT, 1927.

Three applications for registration of Maternity Homes were made during the year, all of which were granted. All were for new certificates of registration consequent upon a change of address of the home having been made.

Six certificates of registration were withdrawn. These included the three cases mentioned above where a change of address had been made, and the other three cases were where the premises had been given up entirely, where intimation was made by the responsible persons that they intended to discontinue maternity work, or where the keeper had died.

No fresh applications for exemption were received.

The following is the number of maternity homes on the register at 31st December, 1938 :—

	Registered.	Exempted.
Maternity Hospitals	2	—
General Infirmarys and Hospitals	1	5
Nursing and Maternity Homes	38	3
	<u>41</u>	<u>8</u>

All these, together with certain institutions and nursing homes which did not come within the definition of a Maternity Home as defined by the Midwives and Maternity Homes (Scotland) Act, 1927, fell to be dealt with under the provisions of the Nursing Homes Registration (Scotland) Act, 1938, which came into operation on 1st January, 1939.

MIDWIVES (SCOTLAND) ACTS, &c., 1915-37.

During 1938 there was a decrease of 3 in the number of midwives who notified their intention to practice, so that there are now on the register 230, compared with 233 at the end of 1937. The number of those entitled to registration by examination is 183, while the number of those registered as having been in practice in 1914 remains unchanged. Of those who ceased practice, 1 died. The number who notified their intention to practice for the first time was 17.

There was a decrease of 151 in the total number of live and still-births notified during the year. Those occurring in the practice of midwives were also fewer by 328, compared with a decrease of 204 which took place in the preceding year. The number of births attended by outdoor maternity nurses, etc., was greater in this instance by 41, but there was a decrease of 67 in the births attended by doctors at home, compared with an increase of 194 in the medically attended births in institutions.

The following table summarises the numbers for the year, with relative figures for the two preceding years :—

	1936.	1937.	1938.
Midwives in Practice during year	225	233	230
THE QUALIFICATIONS FOR CERTIFICATION UNDER ACT, HELD BY THE FOREGOING WERE—			
In Practice, December, 1914	54	47	47
C.M.B. (Scotland) Examination	136	169	168
Other recognised qualifications	35	17	15

In the following table some indication is afforded of the number of births attended during the year by individual midwives. It would seem that of the 6,117 births attended by midwives, 3,993 occurred in the practice of midwives with 50 confinements or more in the year :—

BIRTHS NOTIFIED BY MIDWIVES.							
		1936.		1937.		1938.	
		Births.	Mid-wives.	Births.	Mid-wives.	Births.	Mid-wives.
Under 50 Notifications		2,105	130	1,918	121	2,124	133
50-99	„	2,586	37	2,219	32	2,018	28
100-199	„	1,707	12	2,029	16	1,704	13
200-300	„	252	1	280	1	271	1
		<hr/> 6,650	<hr/> 150	<hr/> 6,446	<hr/> 170	<hr/> 6,117	<hr/> 175

STILL-BIRTHS NOTIFIED BY MIDWIVES.									
			Midwives.			Still-Births notified.			
			1936.	1937.	1938.	1936.	1937.	1938.	
1-5 Notifications	...	...	78	70	64	150	133	113
6-9	„	...	2	3	4	18	20	26	
11	„	...	—	—	—	—	—	—	
			<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	
			80	73	68	168	153	139	
Percentage of Births attended				<hr/> <hr/> 2.4	<hr/> <hr/> 2.4	<hr/> <hr/> 2.3
1936	...	...	...	...	...	In 49 cases, Doctors assisted.		
1937	...	...	...	...	...	In 53 „ „		
1938	...	...	...	...	...	In 54 „ „		

The figures in the two following summaries contain records of ophthalmia occurring in the practice of midwives, so that the numbers are not the same as the actual cases referred to in other sections of this Report.

CASES OF OPHTHALMIA NEONATORUM OCCURRING IN PRACTICE OF MIDWIVES.

				Midwives.			Cases notified.		
Notifications				1936.	1937.	1938.	1936.	1937.	1938.
1-5	...	...	...	66	67	67	138	146	137
6-10	...	...	...	10	12	9	81	92	68
11-15	...	...	...	3	4	4	38	51	51
16-20	...	...	...	1	2	2	17	38	34
21-25	...	...	...	2	1	—	49	30	—
Over 25	...	...	...	—	—	—	—	—	—
				<u>82</u>	<u>86</u>	<u>82</u>	<u>323</u>	<u>357</u>	<u>290</u>
Percentage of Births attended				...	...	...	<u>4.9</u>	<u>5.5</u>	<u>4.7</u>

CASES OF PUERPERAL FEVER OCCURRING IN PRACTICE OF
MIDWIVES.

					Midwives.			Cases.		
					1936.	1937.	1938.	1936.	1937.	1938.
1 Case	...	...	...	...	37	41	31	37	41	31
2 Cases	...	...	...	...	11	11	7	22	22	14
3 "	...	...	...	...	5	4	—	15	12	—
4 "	...	...	...	...	1	4	4	4	16	16
5 "	...	...	...	...	2	—	1	10	—	5
6 "	...	...	...	...	—	—	—	—	—	—
7 "	...	...	...	...	—	—	—	—	—	—
8 "	...	...	...	...	—	—	—	—	—	—
					<u>56</u>	<u>60</u>	<u>43</u>	<u>88</u>	<u>91</u>	<u>66</u>

NUMBER OF REQUESTS FOR ASSISTANCE TO MEDICAL PRACTITIONERS
IN CASES OF EMERGENCY UNDER RULE.

					Midwives.			Requests made.		
Notifications					1936.	1937.	1938.	1936.	1937.	1938.
1-9	...	...	...	...	67	72	72	283	305	356
10-20	...	...	...	...	36	30	30	511	417	415
21-30	...	...	...	...	20	16	16	461	394	365
31-40	...	...	...	...	7	7	7	238	247	358
41-50	...	...	...	...	5	6	6	216	281	41
Over 50	...	...	...	...	8	8	8	569	544	489
					<u>143</u>	<u>139</u>	<u>139</u>	<u>2,278</u>	<u>2,188</u>	<u>2,024</u>

During the year there were 2,024 occasions on which medical help was called by midwives, which represents 33 per cent. of the total births occurring in the practice of midwives, and compares with 34 per cent. in 1937, and 34 per cent. in 1936. Details of the nature of emergency are not given this year, but the following indicates the period during which medical assistance was called :—

NATURE OF EMERGENCY.

						1936.	1937.	1938.
In all cases in which a woman during pregnancy, labour, or lying-in appears to be dying or is dead ...						—	—	—
PREGNANCY.—In cases of a pregnant woman, where there is any abnormality or complication ...						70	66	66
LABOUR.—In the case of a woman in labour at or near term, when there is any abnormality or complication ...						1,721	1,663	1,521
LYING-IN.—In the case of a lying-in woman, when there is any abnormality or complication ...						216	203	183
THE CHILD.—In the child, when there is any abnormality or complication ...						260	250	252
Cannot be classified ...						11	6	2
Total ...						<u>2,278</u>	<u>2,188</u>	<u>2,024</u>

DEATHS (NOTIFIED BY MIDWIVES) BEFORE A DOCTOR

WAS IN ATTENDANCE ...	...	...	...	...	—	11 infants.
LAYING OUT THE DEAD ...	...	...	...	...	—	2 infants.
ARTIFICIAL FEEDING ...	...	...	...	...	29	notifications.
FAILURE TO FOLLOW ADVICE ...	...	...	...	...	8	notifications

INTIMATION OF EXPOSURE TO INFECTION.

DISEASE.	1936.	1937.	1938.
Puerperal Fever ...	49	38	42
Pyrexia ...	30	43	25
Measles ...	8	2	3
Scarlet Fever ...	3	7	6
Diphtheria ...	1	1	5
Pneumonia ...	4	2	1
Erysipelas ...	2	2	—
Whooping-Cough ...	1	—	1
Pemphigus ...	1	4	5
Others ...	4	1	6
Chickenpox ...	—	2	—
Influenza ...	—	1	—
Ophthalmia ...	—	1	—
Venereal ...	—	2	—
	<u>103</u>	<u>106</u>	<u>94</u>

Fees to Doctors in Emergency Cases.—In the following table the total amount of accounts for the year ending November is shown, that being the period at which doctors' accounts are made up :—

Years ended November, 1922-25 (Average)	...	...	£1,629 0 6
„ 1926-30	„	...	1,690 14 6
„ 1934	...	...	1,641 5 0
„ 1935	...	...	1,854 5 0
„ 1936	...	...	1,811 0 6
„ 1937	...	...	1,655 6 0
„ 1938	...	...	1,601 4 6

The practice of issuing accounts with the object of recovering some part of the fee, which was begun as from June, 1922, has been continued, and during the past year £439 3s. 7d. has been so recovered, while £8 4s. was withdrawn from medical practitioners' accounts, and accounts for £1 1s. were deleted.

SCHEME FOR THE PAYMENT OF MIDWIVES FEES IN NECESSITOUS CASES.

Under the scheme for the payment of midwives described in the report for last year, 668 applications were received by the Department during 1938. These were dealt with as follows :—

REFUSED—							1938.
In receipt of maternity benefit	...	...	...	...	...	...	99
Not in accordance with scheme (late)	...	...	...	...	...	...	26
Medical grounds	...	...	...	...	...	...	24
Unsatisfactory home conditions	...	...	...	...	...	...	25
Income over scale	...	...	...	...	...	...	6
							<hr/> 180
GRANTED—							
Confinements completed at home	...	...	...	...	...	...	428
Transferred to hospital after onset of labour	...	...	...	...	...	...	11
Admitted to hospital at own request	...	...	...	...	...	...	14
Withdrawn	...	...	...	...	...	...	35
							<hr/> 488
							<hr/> 668

Fees were paid to midwives as follows :—

Confinements completed at home—428 at 25s.	...	...	£535	0	0
Cases transferred to hospital after onset of labour—11 at 10s.	...	...	5	10	0
			<hr/> £540	10	0

In practically all of the 439 cases dealt with at home or in hospital the family income was under the scale minimum, a proportion of the fee paid to the midwife being recoverable in only 27 cases, as follows :—

HOME CASES—

17 at 20 per cent.	...	...	...	...	...	£4	5	0
3 at 40 per cent.	...	...	...	..	...	1	10	0
5 at 60 per cent.	...	...	...	...	...	3	15	0
2 at 80 per cent.	...	...	...	...	...	2	0	0
making a total amount recoverable of only							<hr/> £11	10 0

Including cases completed at home, or transferred to hospital after onset of labour, the 439 cases for which payment of fees was made by the Department were distributed among midwives as follows :—

No. of Midwives.	Total Cases.
24	24
11	22
12	36
7	28
6	30
18	146
6	89
2	64
<hr/> 86	<hr/> 439
1937 ... 93	472

OPHTHALMIA NEONATORUM.

During the year 777 cases of ophthalmia neonatorum were notified, compared with 796 in 1937. Analysis of these notifications indicates that the greater number of the cases are reported by institution nurses and midwives.

CASES OF OPHTHALMIA NEONATORUM ACCORDING TO
NATURE OF ATTENDANCE AT BIRTH.

Doctors	27
Institutions	155
Institution Nurses	305
Midwives	290
	<u>777</u>

An analysis has been made, both clinical and bacteriological, of all cases notified. The following is the clinical analysis of the 777 notifications:—Ophthalmia, 163; purulent conjunctivitis, 162; simple conjunctivitis, 381; dacrocystitis, 4; styte, 4; proptosis of eye, 1; normal 62. The period after birth within which the first signs of inflammation appeared is given as follows for the whole series, *i.e.*, within 12 hours, 58 cases; between 12 hours and 4 days, 211 cases; between 4 days and 8 days, 228; and over 8 days, 218 cases. This period is important as regards gonococcal infection, as it indicates the probable source of infection. Thus of the total cases, 20 in number, due to this cause, in 13 of the first signs appeared between 12 hours and 4 days after the birth of the child, in 4 between 4 and 8 days, and 3 later than 8 days.

Routine examination for the causative organisms was made in every case reported showing signs of catarrhal inflammation. The results are given in the following table which has been prepared in accordance with the reports and advice of the City Bacteriologist, who has undertaken the examination and classification of the specimens:—

	Ophthalmia.	Purulent Conjuncti- vitis.	Simple Conjuncti- vitis.	Normal.
Gonococcus	20	—	—	—
Staphylococcus	13	21	33	3
Diphtheriod	25	25	82	1
Gram-positive Diplococcus ...	45	42	87	—
Gram-positive Bacillus and Diplo- coccus	—	—	—	—
Gram-positive Bacillus	18	23	41	3
Koch-Weeks Bacillus	9	5	6	—
Gram-negative Bacillus (resembling Coliform Bacillus)	—	3	1	—
Streptococcus	1	3	1	—
Morax-Axenfeld Bacillus	1	6	4	—
Pneumococcus	2	3	4	—
Gram-negative Diplococcus Group	—	—	—	—
No Organism	29	31	122	55
	<u>163</u>	<u>162</u>	<u>381</u>	<u>62</u>

Dacrocystitis—Staphylococcus	...	...	...	...	4
Stye	—Gram-positive Diplococcus	...	...	...	1
	Staphylococcus	...	...	...	3

The number of cases of gonococcal ophthalmia neonatorum is 21. This is the lowest number yet recorded. Of the total cases, 39 were removed to hospital; 40 attended hospital for outdoor treatment and made 140 attendances; the others were treated at home or at the child welfare centres by the nurses who made 6,666 visits in this respect.

Analysis of Indoor Cases.—The number of admissions was 59, including 20 cases occurring outwith Glasgow. Bacteriological examination of the 59 cases showed the following results:—Gonococcus, 20; diphtheriod bacillus, 9; staphylococcus, 3; gram-positive diplococcus, 5; gram-positive bacillus, 6; Koch-Weeks bacillus, 4; Pneumococcus, 1; no organism, 11.

The Wassermann test for syphilis was performed in the 59 cases, and in no case was the test positive, and in none of the children was there any evidence of a syphilitic infection.

During 1938, treatment of cases of ophthalmia neonatorum with M. & B. 693 was begun. Nine consecutive cases of gonococcal infection have received this drug. In each case the result of the treatment was dramatic. Within twenty-four hours the clinical condition of the eyes had cleared up, the swelling of the lid and the discharge having subsided. Daily smears were taken from all cases and in no instance was a positive result obtained after twenty-four hours from the beginning of the drug administration. One case presented special features of interest. The child was admitted to hospital four weeks old with a history of the condition of ophthalmia having been present from the second day after birth. The diagnosis of gonococcal ophthalmia had only been made the day before admission to hospital. By that time there was extensive ulceration of the right cornea. Administration of the drug was begun immediately. Within twelve hours there was practically no discharge and within twenty-four hours the discharge had ceased entirely and the smears were negative. The ulcers healed most satisfactorily and the child was dismissed from hospital sixteen days after admission with only a small corneal scar and with little or no impairment of vision. The dosage given is $\frac{1}{4}$ tablet four hourly, along with soda bicarbonate. All cases have received only two to three days treatment with the drug.

Results of Treatment.—The results in both the gonococcal and the non-gonococcal groups of cases were highly satisfactory. In all cases but one there was complete recovery with no corneal defect. In that case there will be little or no impairment of vision.

PUERPERAL FEVER AND PUERPERAL PYREXIA.

Puerperal Fever.—There were registered during the year 528 cases of puerperal fever against 535 for the preceding year. Deaths numbered 50, the same as for 1937. Cases of puerperal fever per thousand births numbered 24·0 and deaths 2·3, against the respective rates of 24·1 and 2·2.

The relative figures showing cases, deaths, and rates for the past ten years are tabulated below for comparison :—

		Cases.	Deaths.	Case Mortality per cent.	Cases per 1,000 Births.	Deaths per 1,000 Births.
1928	...	413	89	21·5	17·5	3·8
1929	...	516	86	16·7	22·6	3·8
1930	...	598	86	14·4	25·6	3·7
1931	...	663	71	10·7	28·9	3·1
1932	...	710	83	11·7	31·2	3·7
1933	...	543	68	12·5	25·4	3·1
1934	...	619	67	10·8	28·3	3·0
1935	...	589	81	13·7	26·6	3·6
1936	...	500	57	11·4	22·4	2·5
1937	...	535	50	9·3	24·1	2·2
1938	...	528	50	9·4	24·0	2·3

The incidence of puerperal fever would appear to have become somewhat stabilised at a level of 24 cases per thousand births. There was a much higher incidence of puerperal infection during the period 1931-35 when scarlet fever was exceptionally prevalent. This association is shown in the table on page 84. It is possible that this association may be more than a coincidence as the lower birth rate of the past few years and the increase of notifications since the Puerperal Pyrexia Regulations came into force would not wholly account for these facts.

Of the total cases of puerperal fever all but 21 were treated in hospitals, 425 having been removed to fever hospitals; 59 others were treated in Corporation general hospitals and 23 in other institutions.

With regard to age distribution, 37 cases occurred under 20 years of age, compared with 19 for the previous year, the numbers being slightly less at older ages.

The largest number of cases occurred in Provan ward, where there were 28 during the year, followed by 21 in Ruchill and Hutchesontown and 20 in Gorbals, but when the incidence of the disease is related to the births it is found that the highest rate, 29·1 per thousand births, occurred in Partick East, while the rate in Mile-End was 27·6, and in Provan, 26·8. Other wards with high rates were Dennistoun, Pollokshaws and Hutchesontown. There were no cases in Langside.

The number of cases of puerperal pyrexia notified was fewer, 288 against 329, and the numbers treated in hospitals are consequently lower, 63 in fever hospitals and 47 in general hospitals. When the rates for this condition are taken out against the births the highest occurs in Hutchesontown, 12·0, and when combined with the puerperal, the rate becomes 22·9 for this ward, and consequently it comes into the category of high incidence. Other high pyrexia rates were 11·2 in Cowlairst and 10·4 in Gorbals.

The age distribution of deaths from puerperal fever, with the corresponding case and death rates are given in the following table, compared with the respective figures for 1937.

Age	1938.			1937.		
	Cases	Deaths	Rate per 1,000	Cases	Deaths	Rate per 1,000
—20 ...	37	4	108	19	—	—
—25 ...	120	5	41	130	9	69
—35 ...	268	23	86	281	24	85
—45 ...	103	18	175	103	16	155
45+...	—	—	—	2	1	500
	<u>528</u>	<u>50</u>	<u>94</u>	<u>535</u>	<u>50</u>	<u>93</u>

The highest mortality occurred in Mile-End with a rate of 7·4 per thousand births, followed by Cathcart with 5·7, Pollokshaws with 5·3 and Woodside with 4·9.

The death rate of women from other puerperal causes per thousand births for the city was 3·1, compared with 2·8 in 1937. The highest ward rate, 9·7, occurred in Calton, followed by Sandyford with 9·1, Whiteinch 8·1, Pollokshaws, 8·0, and Partick West and Pollokshields both with rates of 7·8.

The combined rate of puerperal sepsis and other puerperal causes was heaviest in Pollokshaws, 13·3.

SECTION IV.

INFECTIOUS DISEASES.

The number of cases of the various infectious diseases registered during 1937, and the number treated in Local Authority hospitals and other institutions, are given in the Appendix Table XVII.; the seasonal prevalence of each is shown in Table XIX., which gives the numbers registered during each month of the year.

For purposes of comparison, the rates for each disease per million of the population, along with the rates for the preceding four years, are given in Table XVIII. of the Appendix. The rates for the principal diseases which have been notifiable over a considerable period are summarised in the following table from 1914 onwards:—

GLASGOW. — CASE-RATE PER MILLION OF THE POPULATION FOR ALL CASES OF INFECTIOUS DISEASES REGISTERED SINCE 1914.

YEAR.	Typhus Fever.	Enteric Fever.	Continued and Undeclared.	Puerperal.	Smallpox.	Scarlet Fever.	Diphtheria and Membranous Croup.	Cerebro-spinal Fever.	Phthisis.	Non-Pulmonary Tuberculosis.	All Other Diseases.	TOTAL.
1914 ...	18	340	7	206	—	5,337	1,440	45	2,284	1,088*	21,675	32,440
1915 ...	9	248	5	175	—	5,973	1,257	167	2,169	1,375	25,389	36,667
1916 ...	17	158	8	178	—	3,719	1,220	131	2,285	1,270	17,001	25,987
1917 ...	1	82	4	148	—	1,634	1,146	75	2,435	1,433	27,005	33,963
1918 ...	49	128	12	151	1	1,193	1,379	67	2,258	1,273	16,045	22,556
1919 ...	30	103	8	163	5	2,443	1,626	72	1,834	1,083	21,359	28,726
1920 ...	8	204	13	267	477	3,378	1,809	76	2,009	1,063	25,509	34,813
1921 ...	6	100	7	299	19	3,272	1,727	56	1,902	1,061	23,965	32,414
1922 ...	18	79	6	274	—	3,234	1,572	62	1,818	977	31,633	39,674
1923 ...	2	117	20	259	—	3,321	1,645	59	1,606	1,149	25,805	33,984
1924 ...	—	76	18	222	2	2,965	1,768	61	1,703	1,137	30,881	38,835
1925 ...	—	41	8	279	—	3,551	1,617	58	1,490	1,039	22,309	30,430
1926 ...	†	92	4	283	—	4,350	2,130	60	1,646	945	31,865	41,385
1927 ...	—	136	4	254	—	3,777	2,785	72	1,489	1,010	32,021	41,550
1928 ...	—	53	4	379	—	2,971	2,414	94	1,582	1,016	29,368	37,880
1929 ...	—	78	4	474	20	3,079	1,944	186	1,656	911	28,838	37,192
1930 ...	2	129	4	549	3	4,555	2,407	136	1,549	962	32,002	42,298
1931 ...	1	102	3	609	—	6,449	1,937	167	1,564	897	36,642	48,671
1932 ...	—	69	1	649	—	8,361	1,966	138	1,572	874	25,745	39,375
1933 ...	—	122	2	492	—	7,593	2,148	140	1,465	720	21,572	34,254
1934 ...	—	39	2	555	—	5,336	2,374	85	1,475	609	40,750	51,225
1935 ...	—	164	4	526	—	3,605	2,207	74	1,569	602	20,817	29,568
1936 ...	—	195	2	447	—	3,845	1,749	66	1,471	635	36,838	36,838
1937 ...	—	63	4	478	—	5,001	2,081	94	1,477	573	23,567	33,338
1938 ...	—	51	3	468	—	3,588	2,515	78	1,550	621	30,744	39,618

* Non-pulmonary tuberculosis made compulsorily notifiable, July, 1914.

† Rates are for extended city.

The incidence rate per million of the population for all infectious diseases registered during the year, 39,618, is higher than that of the three preceding years. The case rate of measles per million was 14,044, compared with 2,029 in 1937; the rate for whooping-cough was 3,659 and for chickenpox, which remains more or less constant from year to year, 5,626. These relatively high rates for diseases not compulsorily notifiable compose the largest part of the group "All Other Diseases" in the above table. The incidence of acute primary pneumonia was 4,731 per million, which compares with 5,233 for the preceding year; the death-rate fell by over 25 per cent.

Of the notifiable diseases scarlet fever had a rate of 3,588 per million, a figure which is considerably less than the corresponding rate of 5,001 for 1937. This is the lowest rate since 1929. Diphtheria, on the other hand, was more prevalent than it has been since 1927, the rate for 1938 being 2,515, against 2,081 for the preceding year, and 1,749 in 1936.

The enterica group of diseases was less prevalent with a rate of 51, compared with 63 for the preceding year, and 39 in 1934 which was the lowest hitherto recorded. The case rate for cerebro-spinal fever was more favourable than that of the previous year and so also was that for puerperal fever.

DISEASES FORMERLY CALLED "PRINCIPAL ZYMOTIC DISEASES."

The death rates for several periods have been:—

1881-1890, 3·000 per 1,000 living.	1931, 1·394 per 1,000 living.
1891-1900, 3·282 "	1932, 0·960 "
1901-1905, 2·660 "	1933, 0·758 "
1906-1910, 2·450 "	1934, 1·094 "
1911-1915, 2·424 "	1935, 0·702 "
1916-1920, 1·607 "	1936, 0·923 "
1921-1925, 1·303 "	1937, 0·795 "
1926, 1·257 "	1938, 0·757 "
*1927, 1·141 "	
1928, 1·232 "	
1929, 0·874 "	
1930, 0·984 "	

*Diarrhoea over 2 years excluded.

SMALLPOX AND VACCINATION.

No case of smallpox has occurred in the city since 1931 although a few contacts with cases occurring on board ships from abroad are reported from time to time.

The number of conscientious objections to vaccination has again increased, as shown in the table given below which brings the statistics in respect of vaccination up to the end of 1937. For the year, only 40.3 per cent. of the children born were successfully vaccinated, compared with 41.4 for the previous year. This percentage was 83 in 1906, the year prior to the passing of the Vaccination (Scotland) Act, 1907, which permitted exemption from vaccination on grounds of conscientious objection. The percentage of conscientious objectors has risen from under 1 to 43.5.

TABLE SHOWING RESULTS OF PRIMARY VACCINATION OF CHILDREN BORN DURING SEVERAL YEARS.

(From the Detailed Annual Reports of the Registrar-General.)

Year.	Successfully vaccinated. Per cent.	Insusceptible of vaccine disease. Per cent.	Died before vaccination. Per cent.	Conscientious objection to vaccination. Per cent.	Vaccination postponed. Per cent.	Unaccounted for. Per cent.
1906,	82.9	0.5	10.6	0.2	0.8	5.0
*	*	*	*	*	*	*
1914,	51.7	0.9	12.1	25.1	1.8	8.4
*	*	*	*	*	*	*
1935,	42.3	2.9	8.3	40.7	1.4	4.5
1936,	41.4	2.0	8.5	42.1	1.3	4.7
1937,	40.3	1.7	8.6	43.5	1.1	4.8

These percentages indicate that more than half the child population is unprotected against smallpox.

During 1938, cases reported by registrars as not having lodged certificates under the Act numbered 4,298, compared with 4,491 for the preceding year. The following abstract shows the results of action taken by the Assistant Vaccination Officer, compared with 1937.

	1938.	1937.
Cases vaccinated,	1,519	1,551
„ postponed,	1,703	1,628
„ not susceptible to vaccine disease, ...	73	103
„ died before vaccination,	26	24
„ not found,	780	879
„ written off by Department of Health, ...	255	304
„ pending a decision,	1	2

In addition to 272 visits made by the Vaccination Officer, 3,483 visits were paid by Assistant Sanitary Inspectors, making a total of 3,755, approximately 87 per cent. of the number of cases referred to the Department. All the 60 defaulters were conscientious objectors who had failed to claim exemption within the specified period.

Fifty-nine of these cases have been disposed of on the instruction of the Department of Health for Scotland. One case has been refused by the Department of Health and this is receiving special attention.

The total number of children vaccinated at the clinics held at the child welfare centres in the various districts of the city was 2,406, compared with 2,220 in 1937. The following table shows the number of children vaccinated at these centres during the past three years:—

STATEMENT SHOWING NUMBER OF INFANTS VACCINATED AT THE CHILD WELFARE CONSULTATIONS DURING THE YEARS 1936-38.

Centre.	1936.	1937.	1938.
Public Health Office,	282	290	240
Maryhill,	134	153	149
Govan Town Hall,	92	89	113
Gorbals,	320	310	373
Partick,	84	55	64
Weir Street,	80	88	111
Bridgeton,	385	353	408
Shettleston,	296	297	325
Elder Park,	96	92	115
Springburn,	148	151	168
Richard Street,	132	141	129
Blawarthill,	46	57	54
Provan,	103	144	157
	<u>2,198</u>	<u>2,220</u>	<u>2,406</u>

TYPHUS FEVER.

No case of this disease occurred during the year. There have been only three cases of typhus in the city since 1927.

ENTERIC INFECTIONS.

By Dr. E. Bloch.

The number of notified cases of enteric infection, the number verified and the causal organisms were as follows:—

Cases Notified.	Cases Verified.		Total.
	Typhosus.	Paratyphosus B.	
91	28	29	57

Both types of infection thus remained at a low level, the annual total being the third lowest on record. The largest group of connected cases consisted of the seven females involved in the hospital outbreak described below.

Seasonal Distribution according to Dates of Sickening.—

	Jan.	Feb.	Mar.	Apr.	May	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Typhoid, ...	3	2	1	2	2	1	—	4	4	7	2	—	28
Paratyphoid, ...	4	1	—	2	6	1	1	3	4	5	1	1	29
	11			14			16			16			57

The table shows that almost half the total cases sickened during the period August to October.

Age and Sex Distribution.—A preponderance of females among the paratyphoid cases is again revealed by an analysis of the age and sex distribution.

	-1	-5	-10	-15	-20	-25	-35	-45	-55	-65	65+	Total
Typhoid.												
Males, ...	—	1	—	3	3	1	3	1	1	—	—	13
Females, ...	—	—	1	5	—	2	1	1	—	3	2	15
Paratyphoid.												
Males, ...	—	—	1	1	—	1	1	2	—	—	—	6
Females, ...	—	1	—	4	1	1	4	5	2	5	—	23
	—	2	2	13	4	5	9	9	3	8	2	57

Source of Infection.—The opinion was formed that 13 cases had been infected outside Glasgow—8 typhoid cases in Ayrshire, Argyllshire, Buteshire, Dunbartonshire, Lanarkshire, the south-west of Scotland, Wales and abroad respectively; and 5 paratyphoid cases in Dunbartonshire, Renfrewshire, Stirlingshire, the north of Scotland and abroad respectively.

Institutional Cases.—The number of persons infected in institutions and cases admitted to general hospitals from addresses outwith Glasgow was 15, of whom 10 were paratyphoid cases. These figures include an outbreak of paratyphoid involving 6 cases and a carrier which occurred in the spring in a large voluntary hospital in the City, and is described in the following report.

OUTBREAK OF PARATYPHOID FEVER IN A GLASGOW HOSPITAL
ATTRIBUTABLE TO A CARRIER.

It occasionally happens that a patient harbouring typhoid or paratyphoid infection gains admission to the wards of a general hospital and become a source of infection to other patients and to members of the nursing staff. The presence of the infection may be quite unsuspected until other cases arise in the ward. By

this time the carrier may or may not have returned home, but in any case has to be sought for by routine bacteriological investigation among patients and staff. The following occurrences are of general interest, as they illustrate a typical sequence of events when the accidental introduction of a paratyphoid carrier is followed by a group of subsequent cases in a surgical ward of a large voluntary hospital.

A woman, aged 36 years of age, had been admitted on 26th April as a femoral hernia and a radical cure performed two days later. She had done well and the wound had healed satisfactorily, her temperature, pulse and respirations remaining normal. The first anxiety for the patient was felt on 6th May, eleven days after admission, when she vomited and her pulse and temperature became elevated. As her condition failed to improve and she suffered from headache and diarrhoea, her stools were examined and her blood cultured, both, however, with negative result. On 11th May her Widal was examined and was found to be positive to *B. paratyphosus* B. in a dilution greater than 1/320. When examined on 12th May she had a definite rose rash, elevated temperature, and typical typhoid appearance. She was removed to a fever hospital.

There were present in the ward two other patients who had elevated temperatures and who were suspected of having throat conditions, their swabs having been sent to the Bacteriologist. The first of these, a girl aged 10 years, had been admitted ten days previously as an acute appendix; the appendix had been removed two days after admission, and the patient had done well until the previous evening when she had become acutely ill. The other case, a woman of 45 years, had not been well since 8th May, had a sore throat, some abdominal discomfort, and an elevated temperature and pulse. These two cases were regarded as suspicious on clinical grounds, and were also removed to the fever hospital. A search for a possible source of infection among the other patients in the ward and among the staff was then instituted in co-operation with the bacteriologist to the hospital.

The subsequent events in the infected ward were (a) the occurrence of three additional cases of paratyphoid fever, one sickening on 14th May and two on 19th May, and (b) the discovery of a paratyphoid carrier in the case of a woman of 55 years who had been admitted to the ward on 25th April suffering from pyloric

obstruction. Although, as will be observed from the table below, the incubation periods of the cases in the ward were somewhat short, this patient may be regarded as the source of infection.

To complete the picture, the detailed clinical and other observations made at the time and the action taken may be briefly described. When the first cases had been diagnosed there was nothing to indicate the source of infection. In the first place, all patients in the ward who had suffered at any time from abdominal discomfort, diarrhoea or slight rise in temperature had their stools and urine examined and their blood cultured. In the next place, specimens of blood were taken from all patients, nursing staff and ward maids for Widal examination. No member of the staff, either nurse or maid, returned a positive Widal reaction. The blood of one patient, the woman of 55 years above mentioned, had a strongly positive reaction to bacillus paratyphosus B. She had no symptoms, her pulse and temperature being normal. She was removed to a fever hospital, where subsequently the paratyphoid B. bacillus was obtained from her urine.

The incubation period for all of the six cases removed from the ward varied from nine to twelve days from their first contact with the carrier. The ages, dates of admission and sickening, and incubation periods are shown in the following table:—

PRESUMING INFECTION FROM H.S. (CASE OF PYLORIC OBSTRUCTION).

		Age.	Condition on Admission.		Date of Admission to Ward.	Date of First Contact with E.S.	Date of Sickening.	Incubation Period
1st Case	B.B.	36	Femoral Hernia ...		26.4.38	26.4.38	6.5.38	10 days
2nd "	C.L.	45	Abdominal Hernia		18.4.38	26.4.38	8.5.38	12 days
3rd "	M.D.	10	Appendicitis ...		2.5.38	2.5.38	11.5.38	9 days
4th "	M.O.	29	Appendicitis ...		2.5.38	2.5.38	14.5.38	12 days
5th "	A.L.	27	Appendicitis ...		9.5.38	9.5.38	19.5.38	10 days
6th "	M.X.	25	Appendicitis ...		9.5.38	9.5.38	19.5.38	10 days

Deaths.—These numbered 5. Two males aged 30 and 32 and a female aged 27 died of typhoid fever; two females aged 10 and 59, of paratyphoid. The following table shows the death-rate from enteric infections per 1,000 living since 1881:—

1881-1890,	...	...	0.230	1931-1935,	...	0.609
1891-1900,	...	...	0.215	1936,	...	0.012
1901-1910,	...	...	0.127	1937,	...	0.004
1911-1920,	...	...	0.041	1938,	...	0.004
1921-1930,	...	...	0.010			

Carriers in Hawkhead Mental Hospital.—There were 15 female carriers in this institution at the end of the year.

Chronic Carriers.—At the end of 1937 there were 26 known carriers resident in the City. During 1938 specimens from 12 of these were examined with the following results:—

No.	Urine.	Fæces.	No.	Urine.	Fæces.
12	Neg.	Pos.	20	Pos.	Pos.
13	Neg.	Pos.	21	Neg. (6)	—
14	Neg.	Pos.	26	Neg. (4)	Neg. (4)
15	Neg.	Neg.	27	Neg.	Pos.
18	Neg.	Neg.	28	Neg.	Pos.
19	Neg.	Pos.	29	Neg.	Pos.

Positive results were thus found in 8 instances. Six carriers were removed from the list during 1938 as follows:—No. 6 died from accidental injuries; No. 11 has left Glasgow, and trace has been lost of No. 24; No. 15 appears to have been cured in 1934 by the cholecystectomy operation at which her carrier state was detected; No. 18 is now regarded as having been a contact carrier in 1935; and No. 26 has also been removed from the list following negative reports on 8 specimens of urine and 8 of fæces. As 6 carriers were discovered during 1938, there are now again 26 carriers in Glasgow, distributed as follows:—

Northern Division	...	Nos. 8, 13, 27, 28, 29, 32, 35.
South-eastern Division		No. 14.
South-western Division		Nos. 20, 21, 25, 36, 37.
Eastern Division	...	Nos. 3, 10, 12, 19, 30, 33, 34.
Central Division	...	Nos. 4, 9, 16, 22, 23, 31.

Details regarding the 6 newly discovered carriers, who are all females, are appended.

No. 32, Northern Division, Ward 10. Reference E.S. Female, aged 51. Intestinal and urinary carrier of *B. typhosus*. Sickened of enteric in December, 1937. Detected as a carrier in 1938 during home treatment. No secondary case since detection. Specimens examined—urine, pos. (4); neg. (4); fæces, pos. (6); neg. (2).

No. 33, Eastern Division, Ward 4. Reference H.S. Female, aged 55. Urinary and intestinal carrier of para. *B.* Original illness—nil. Detected as a carrier in May, 1938. Six secondary institutional cases at detection (as described above). Specimens examined since dismissal from fever hospital—urine, pos.; fæces, pos.

No. 34, Eastern Division, Ward 4. Reference A. Female, aged 79. Urinary and intestinal carrier of *B. typhosus*. No known original illness. Detected in May, 1938. One secondary case at detection. Urine pos. and fæces pos. in December.

- No. 35, Northern Division, Ward 10. Reference J. M. Female, aged 62. Intestinal carrier of para. B. Original illness indefinite—operation for gallstones in April, 1938, in surgical ward involved in outbreak described above; also reports "gastric influenza" in July. Detected in November, 1938. One secondary case at detection.
- No. 36, South-Western Division, Ward 29. Reference A. L. Female, aged 36. Intestinal carrier of para. B. Sickened in August, 1938. Detected in December, 1938. No secondary cases. Lives with carrier No. 37.
- No. 37, South-Western Division, Ward 29. Reference M. F. Female, aged 39. Intestinal carrier of para. B. No known original illness. Detected in September, 1938. One secondary case at detection, namely, carrier No. 36.

SCARLET FEVER.

During the year 4,047 cases of scarlet fever were registered, compared with 5,601 in 1937. The respective case rates per million for the population were 3,588 and 5,001. The latter rate was considerably above those of the two preceding years but well below the excessive rates of the years 1931-4 when there was a long term prevalence quite apart from the usual annual seasonal swing. These heavy rates, reaching to 8,361 in 1932, may be compared with the lowest rate of 1,193 so long ago as 1918. The following table, which gives the age distribution of cases for 1938, shows that the average age of attack is between seven and ten years; thus the great bulk of the cases occur during the school period.

Age Groups and Sex.

	Hospital.		Home.		Total.
	Male.	Female.	Male.	Female.	
— 1 year,	9	5	3	4	21
— 2 years,	108	83	7	9	207
— 5 "	482	528	52	56	1,118
—10 "	647	749	91	125	1,612
—15 "	203	259	43	50	555
—20 "	80	104	10	10	204
—25 "	35	77	10	8	130
—35 "	43	63	8	10	124
—45 "	15	23	5	5	48
—55 "	9	7	1	—	17
—65 "	1	7	2	—	10
65+ "	—	1	—	—	1
	1,632	1,906	232	277	4,047

No outbreaks of the disease in connection with milk supplies or schools, etc., were recorded during the year. The ward incidence varied largely with the number of children of susceptible ages. With regard to seasonal prevalence, which is given in Table XIX

in the Appendix, it may be noted that the autumnal rise was less marked than is usually the case. Of the 4,047 cases that were notified, 513 or 12 per cent. were treated at home.

Hospital Return Cases.—The total number of hospital return cases was 99, or 2.7 per cent. of the patients dismissed from hospital during the year, compared with 2.9 per cent. return cases last year.

TABLE C.

Day's Residence in Hospital.	Cases Dismissed within this Period.	Return Cases Associated.	Percentage of Total Dismissals.
—28 days,	1,244	26	2.0
—35 "	1,231	37	3.0
—42 "	374	13	3.5
+42 "	872	23	2.6
Total ...	<u>3,721</u>	<u>99</u>	<u>2.7</u>

The death-rate per thousand of the population from scarlet fever since 1881 is shown in the following table:—

1881-1890, ...	0.490 per 1,000	1930, ...	0.038 per 1,000
1891-1900, ...	0.295 "	1931, ...	0.068 "
1901-1910, ...	0.116 "	1932, ...	0.093 "
1911-1915, ...	0.163 "	1933, ...	0.075 "
1916-1920, ...	0.060 "	1934, ...	0.069 "
1921-1925, ...	0.065 "	1935, ...	0.033 "
1926, ...	0.083 "	1936, ...	0.029 "
1927, ...	0.040 "	1937, ...	0.026 "
1928, ...	0.031 "	1938, ...	0.026 "
1929, ...	0.037 per 1,000		

DIPHThERIA.

During the year 2,837 verified cases of diphtheria were notified to the Department. This number, which is represented by a case rate of 2,515 per million, shows an increase of 507 over the previous year and maintains the rise in incidence taking place since the year 1936. The present rate is decidedly high and is only surpassed by the year 1927, when a rate of 2,685 per million was registered.

Year by year, different wards in the City seem to be more heavily affected than others. The ward giving the highest rate, 4,684 per million, was Kinning Park, but other wards also showed a high incidence, such as Cowcaddens, 3,837 per million; Gorbals, 3,676 per million; and Kingston, 3,604 per million. On the other hand, Kelvinside registered the low rate of 647 per million; Camp-hill, 753 per million; and Langside, 877 per million, taking second and third lowest places.

Diphtheria has a seasonal preference for the autumn and winter months. November was the peak month, with 385 cases, while October recorded 311 cases and December 286 cases. Two hundred and seventy-five cases in March and 244 cases in April suggest a slight spring increase.

Children are very susceptible to this infection and at the ages 2-10 years seem to be especially so. The following table gives the percentage of cases at the various age groups.

—1 year.	—2 years.	—5 years.	—10 years.	—15 years.	—20 years.	20+ years.
1	3	24	38	17	8	9

Of all the cases, 28 per cent. occurred in children of pre-school age, 38 per cent. in children attending infant and junior schools, 17 per cent. in children attending senior schools, and 17 per cent. in persons of post-school age. These figures are practically similar to those of last year.

With regard to the sexes, females were affected in greater numbers than males, the actual figures being 1,588 females, as against 1,249 males. Girls in the 10-15 year age group showed a slight but definite increase, but in the post-school age group their numbers more than doubled that of the males (353 females and 130 males).

Every encouragement is given for early hospitalisation of patients and where the diagnosis is doubtful, the Local Authority provide anti-diphtheritic serum for administration, pending the result of bacteriological examination. Only 40 cases (1.4 per cent.) were treated at home by their own medical attendant.

An enquiry into the home conditions of the patients showed that many came from houses which were overcrowded according to the standard laid down in the Housing (Scotland) Act, 1935. Herewith is a table which gives the percentage of cases in which overcrowding existed in relation to the size of house. An attempt has been made to distinguish between old houses and new houses, the latter being defined as houses constructed within the last 10-12 years and owned by the Local Authority or else privately owned.

	1 Apt.	2 Apts.	3 Apts.	4+ Apts.	Total.
Percentage of Cases from Overcrowded Houses—Old Type	95	73	48	14	41
Percentage of Cases from Overcrowded Houses—New Type	—	76	31	14	29
Percentage of Overcrowded Houses in City at Official Survey, 1935 ...	51	42	18	7.8	30.3

The above figures for 2, 3 and 4 and over apartment houses agree fairly well in the two types of houses, but they are much in excess of these figures representing the percentage of overcrowded houses in the City at the Official Survey made in 1935. Further investigation was made into the types of houses and the incidence of diphtheria, and the results are set out briefly as follows:—

	1 Apt.	2 Apts.	3 Apts.	4+ Apts.	Total
No. of Cases of Diphtheria per 10,000 Houses of each size—					
Old Houses	117	109	78	51	90
No. of Cases of Diphtheria per 10,000 Houses of each size—					
New Houses	—	116	124	93	111

From the above table it would appear that the inmates of new houses are more susceptible than those in old houses of similar sizes, but these new houses were erected to rehouse people from slum clearance schemes and to abate overcrowding, and they therefore house large families of susceptible children.

The death-rate for diphtheria was 117 per million, which is definitely higher than last year's rate but not so high as in some previous years. Actually there were 132 deaths, of which 49 were males and 83 females. Six deaths took place at home before removal to hospital could be accomplished, while three cases died in a general hospital, having been admitted there only a few hours prior to death.

The following table gives the distribution of cases, deaths and mortality rates in the several age groups, and there is also included, for comparison, the case mortalities of the two previous years. It shows that this disease is still more fatal at the younger age periods.

Age	—1 Year	—5 Years	—10 Years	—15 Years	15+ Years	Total
No. of Cases	31	780	1,071	472	483	2,837
No. of Deaths	4	61	54	9	4	132
Case Mortality per cent. ...	12.9	7.8	5.0	1.9	0.8	4.6
Case Mortality per cent. for 1937	14.8	8.5	4.8	3.9	1.8	4.9
Case Mortality per cent. for 1936	3.6	4.4	3.5	1.2	0.7	2.7

There still appears to be some delay by parents in seeking medical advice, and too often the disease is well advanced when the victim is ultimately admitted to hospital. Only 52 per cent. of those dying were admitted to an institution within two days

of sickening; 73 per cent. were removed within three days of sickening; and 87 per cent. were removed within four days of sickening. Eleven children were ill at home for one week or longer before removal took place. The period of residence in hospital of the fatal cases is as follows:—79 children (66 per cent.) died within one week of admission; 32 children (27 per cent.) died within two weeks of entry; and nine children died after two weeks' or more residence.

Deaths were certified to be due to—faucial diphtheria, 52 cases; faucial and nasal diphtheria, 32 cases; laryngeal diphtheria, 11 cases; and diphtheria (local lesion not stated), 15 cases. Other deaths were due to diphtheria and some other complicating illness, such as broncho-pneumonia, measles or scarlet fever. In six fatal cases pharyngeal or palatal paralysis was noted.

The following table shows the death-rates per 1,000 of the population since the year 1881.

1881-1890, ...	0.280 per 1,000 living.	1929, ...	0.124 per 1,000 living.
1891-1900, ...	0.231 "	1930, ...	0.133 "
1901-1905, ...	0.134 "	1931, ...	0.109 "
1906-1910, ...	0.205 "	1932, ...	0.109 "
1911-1915, ...	0.187 "	1933, ...	0.081 "
1916-1920, ...	0.143 "	1934, ...	0.144 "
1921-1925, ...	0.123 "	1935, ...	0.103 "
1926, ...	0.121 "	1936, ...	0.048 "
1927, ...	0.104 "	1937, ...	0.104 "
1928, ...	0.128 "	1938, ...	0.117 "

ERYSIPELAS.

The case rate for erysipelas is fairly uniform from year to year. In 1938 the incidence rate was 859 compared with 927 for the preceding year. The incidence of the disease is highest during the winter months. During the year 604 of the 969 cases were removed to fever hospitals and 7 others treated in general hospitals.

DISEASES OF THE CENTRAL NERVOUS SYSTEM.

Cerebro-Spinal Fever.—In 1938 there were 88 cases compared with 106 for the preceding year; the incidence was slightly above that of previous years but considerably lower than the numbers obtaining during the prevalence of 1929-33. There was no outbreak of the disease, although there were 12 cases of mild type in Yoker and Knightswood ward. In Kingston ward there were 8 cases and 4 deaths.

Of the cases registered, 21 were under one year of age and 11 between one and two years. Male cases numbered 46 and females 42, while the deaths numbered 19 for each sex, giving case mortalities of 41 and 45 per cent.

Encephalitis Lethargica.—Cases registered numbered 8, all of which were chronic forms of the disease notified for the first time during the year. Of the total cases, two were removed to Corporation general hospitals, the others remaining at home.

Acute Polio-Encephalitis.—One case of this disease was registered—a female under 10 years of age.

Anterior Poliomyelitis.—Many people in various parts of the country were alarmed at the prevalence of poliomyelitis during the summer months. Glasgow did have an increased incidence of cases, but the total number (42 patients) was only slightly higher than that of some other years, particularly 1933, when 33 cases were notified. The only year a definite outbreak occurred was in 1928 when there were 112 cases. Of the 42 cases notified and verified, only 38 were actually domiciled in the City at the time of sickening, and the following brief survey deals only with these Glasgow patients.

Herewith is a table which shows the cases in relation to the month of sickening and the area of the City in which they lived:—

Division of City			Sickening Dates.									Total
			Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
Central	...	...	—	—	1	1	1	2	2	—	—	7
Northern	...	...	1	—	4	2	2	—	1	—	—	10
Eastern	...	...	—	1	4	4	1	—	—	1	—	11
South-Eastern	...	...	—	—	—	—	1	—	—	—	—	1
South-Western	...	...	—	—	2	4	1	2	—	—	—	9
			1	1	11	11	6	4	3	1	—	38

The two adjoining divisions of the City, namely, the Northern and Eastern, together accounted for more than half the total cases; the disease made its first appearance there. No grouping of cases took place and only two cases apparently received their infection from a previous case; the first where two children contracted the disease in the same house with an interval of eight days between their sickening dates; and the second where two children, cousins, living in different houses, but almost in daily contact with each other, developed poliomyelitis with an interval of 14 days between sickening dates.

Males were affected in greater numbers than females, the actual figures being 24 males and 14 females. Children at the younger ages were more affected; thus, there were three cases under 1 year, 14 cases under 2 years, 11 cases under 5 years, 3 cases under 10 years, and 7 cases of 10 years and over. Three patients (2 men and 1 woman) were in the 20-30 years age group. These age groupings are in close agreement with those of the outbreak in 1928.

In this malady the symptoms of onset are most varied both in nature and severity, and in some cases paralysis was the first indication parents had that something was wrong with the child. Feverishness was noted in 11 cases, pain in the affected part in 9 cases, drowsiness in 8 cases, irritability in 5 cases, and vomiting in 5 cases. Four patients were admitted to hospital as suspected cases of cerebro-spinal fever. Catarrhal symptoms affecting the respiratory and intestinal tracts were not a common feature. Paralysis affecting one leg was noted in 16 cases, two legs in 7 cases, one arm in 7 cases, one leg and one arm in 3 cases, back in 1 case, and part not stated in 4 cases.

With one exception all the cases were treated in hospital, the exception being a man with paralysis of one arm who was notified after the period of isolation had expired and who was referred to a general medical clinic for treatment. Thirty patients were treated in the isolation hospitals and at December, 1938, 17 patients had been transferred to an Orthopædic Hospital, while 11 patients were dismissed home either at the parents' request or else were fit enough to receive treatment at an outdoor clinic supervised by an Orthopædic Surgeon.

Only one of the Glasgow cases terminated fatally after a residence in hospital of three weeks. This gives a case mortality of 2.6 per cent., and compares favourably with 7.3 per cent., the mortality recorded in 1928. Both these figures represent a low case mortality for this disease.

Poliomyelitis is no respecter of persons, attacking rich and poor alike. Twenty-six (68 per cent.) of the above patients resided in overcrowded houses. There were 11 cases from one-apartment houses, 16 cases from two-apartment, 9 cases from three-apartment houses, and 2 cases from four or more apartment houses.

POST-ENCEPHALITIS LETHARGICA.

A survey of the cases of post-encephalitis lethargica in the City shows that there are at present 235 cases, and of these 126 are males and 109 females, compared with 259 known cases at the end of the previous year. Only one new acute case occurred, and 6 chronic cases were notified during the year. There were 21 deaths, 12 males and 9 females, and 4 cases are reported to have recovered.

The age distribution of the cases is as follows:—

				Males.	Females.	Total.
—15 years,	...	...	...	—	2	2
—20	„	...	...	7	3	10
—30	„	...	...	52	30	82
—40	„	...	...	37	39	76
+40	„	...	...	30	35	65
				126	109	235

The physical condition of these patients can be inferred from the following table:—

				Males.	Females.	Total.
Fit for School,	...	...	...	—	2	2
Unfit for School,	...	...	...	—	—	—
Fit for housework,	...	...	...	2	26	28
Fit for employment,	...	...	...	17	1	18
Unfit but going about,	...	...	...	52	30	82
Bedridden at home,	...	...	...	13	13	26
Cases in general hospitals,	...	...	...	26	31	57
Cases in mental hospitals,	...	...	...	16	6	22
				126	109	235

Two wards in Stobhill Hospital, one for males and one for females, are still occupied by cases of post-encephalitis lethargica, and many of these cases have been there for several years. The admission and dismissal rate is naturally very slow and is dependent on home conditions which are in most cases unsuitable for the accommodation of such patients.

The group of cases, originally numbering 70, which has been under the continuous supervision of Dr. Ashie Main of this Department since 1923, now numbers 30, compared with 31 last year,

one having died in the interval. The following table shows the clinical classification of this group at the end of 1938:—

Group I.—Recovery complete : 4 cases.

„ II.—Recovery incomplete : Mental retardation, 2 cases ; mental instability, 1 case ; nervous instability, 12 cases ; physical defect and mental instability, 1 case.

„ III.—Perversion of conduct : 1 case.

„ IV.—Parkinsonians : Normal mentality, 3 cases ; abnormal mentality, 6 cases.

MEASLES.

As recorded in the Report for last year, measles made its appearance in epidemic form in November, 1937. Thereafter the disease rapidly spread from ward to ward, at first in the east and afterwards in the north and west, the infection then spreading to areas south of the river. As usual, wards with a large proportion of children were most heavily infected, 920 cases occurring in Ruchill, 915 in Gorbals, and 818 in Shettleston. The total number of deaths from measles was 257, compared with 29 in 1937. The highest mortality occurred in Gorbals where there were 31 deaths, followed by 20 in Hutchesontown and 17 in Dalmarnock, these being densely populated wards with many children of susceptible ages.

The total number of cases registered during the year was 15,839 but as about 2,000 cases were registered in the closing months of 1937 the cumulative total for the epidemic would appear to be between 17,000 and 18,000 cases. The pre-war incidence of the disease was in the region of 15,000 per million of the population, so that, allowing for the 30 per cent. reduction in the birth-rate since that period, the present annual incidence of about 10,000 per million would seem to indicate that the same high level is being maintained.

The following table shows the cases that have occurred during the past five years.

				Cases.	Deaths.	Mortality Percentage.
1934, ...	...	...	...	24,607	514	2.1
1935, ...	...	...	...	893	8	0.9
1936, ...	...	...	...	20,196	311	1.5
1937, ...	...	...	...	2,272	29	1.3
1938, ...	...	...	...	15,839	257	1.6

The sex incidence was practically the same except at the age of 1-2 years when 979 male cases were registered against 871 females. As already reported in Section II, the fatality is greatest at very young ages, and the following table is introduced to show age fatality of the disease for each sex. The infant fatality given demonstrates the usual high excess among males.

Age.	Cases		Deaths		Death rate per Thousand Cases	
	Males.	Females	Males	Females.	Males.	Females.
— 1	477	499	43	31	90	62
— 2	979	871	60	58	61	67
— 5	2,792	2,799	25	29	9	10
—15	3,583	3,577	3	4	1	1

Because of the danger to child life, it has been the practice in recent years to reserve as far as possible hospital beds for the treatment of children at the younger ages, especially those who suffer from some complication such as respiratory disease; patients ordered for removal to hospital are therefore visited by health visitors seconded from other duties during the winter months. In 1938 the cases removed to hospital numbered 1,355, while 61 other cases were treated in general hospitals.

The number of cases of German measles recorded during the year was 489, compared with 207 for the preceding year.

WHOOPIING-COUGH.

The incidence of whooping-cough, in contrast with measles, was more continuous throughout the year. It was prevalent during the winter months and the summary introduced in the Report for last year is here repeated to show the annual numbers recorded to the middle of the year.

CASES OF WHOOPING-COUGH REGISTERED FOR THE YEAR ENDING JUNE 30.

1933-34,	...	...	...	...	...	3,017
1934-35,	...	...	...	...	...	10,691
1935-36,	...	...	...	...	...	2,106
1936-37,	...	...	...	...	...	6,645
1937-38,	...	...	...	...	...	1,388

The total cases registered during the calendar year were 4,127, compared with 8,715 for 1937. The seasonal incidence given in Table XIX in the Appendix shows that the next epidemic of the disease had begun in the latter part of the year, the highest monthly number being recorded in December. Of the total cases registered,

305 were admitted to fever hospitals, compared with the respective figures of 697 in 1937. On the average, the number of cases of whooping-cough removed to hospital is about half that for measles but as the period of treatment is twice as long, 55 days against 27, the demand for hospital beds is the same.

Most of the mortality occurs before school age and, as is the case with measles, is heaviest in the first and second years of life. The number of deaths registered during the year was 88, which compares with 285 in 1937. The highest mortality occurred in Govan ward where there were 9 deaths, followed by 7 in Gorbals and a similar number in Anderston. The case mortality per cent. was 2.1, compared with 3.3 for the previous year.

CHICKENPOX.

This disease usually has a sustained and general prevalence throughout the City. The number of cases registered in 1938 was 6,345, which is slightly more than the number registered in the preceding year, namely, 6,225. Of the total, 193 cases were treated in fever hospitals.

TRACHOMA.

The number of definite cases of trachoma on the register at the end of 1938 was 150, a further 13 cases being considered doubtful. The following table shows the cases on the trachoma register for the past 12 years, and it will be observed that the numbers have remained more or less the same.

NUMBER OF CASES ON TRACHOMA REGISTER.

Year.	No. of Definite Cases.	No. of Doubtful Cases.	Total on Register.
1927	132	56	188
1928	127	35	162
1929	147	35	182
1930	145	22	167
1931	143	15	158
1932	137	9	146
1933	129	14	143
1934	120	13	133
1935	130	13	143
1936	133	10	143
1937	136	11	147
1938	150	13	163

The total number of notifications received during the year was 17, 15 of these being new cases and 2 being re-notifications. Of the 15 new cases, 12 were considered to be definitely suffering from

trachoma, 2 were negative, the remaining 1 being doubtful. Four old cases of trachoma returned for treatment. The number of new cases of trachoma notified from 1914 till the present year is shown in the following statement:—

TABLE SHOWING THE NUMBER OF NEW CASES OF TRACHOMA NOTIFIED FROM 1914 TO 1938.

Year.				No. of New Cases.	Definite.	Doubtful	Not Trachoma
1914-15	...	...	...	151	Figures not available.		
1916-20	...	...	...	368			
1921-25	...	...	...	292			
1926-30	...	...	...	170			
1931	...	...	...	32	25	3	4
1932	...	...	...	24	13	2	9
1933	...	...	...	20	8	9	3
1934	...	...	...	17	7	4	6
1935	...	...	...	18	16	2	—
1936	...	...	...	12	11	1	—
1937	...	...	...	15	13	2	—
1938	...	...	...	15	12	1	2

During the year 22 cases were removed from the register for the following reasons—considered cured, 1; left the city, 2; removed, left no address, 7; ceased attending, 12. Every endeavour was made to obtain the attendance of home contacts of new cases at the dispensary. A total of 24 contacts were examined and amongst these 3 definite cases of trachoma were discovered, 15 were negative and 3 doubtful. Conjunctivitis of varying degree was noted in 3 other contacts.

The number of home contacts of trachoma, together with those found to be suffering from trachoma, examined by the consulting ophthalmologist at the clinic for the past 10 years is shown below.

NUMBER OF HOME CONTACTS OF TRACHOMA EXAMINED AT THE CLINIC.

Year.				No. of Contacts examined.	No. found with Trachoma.	Doubtful.	Con-juncti-vitis.	Negative
1929	...	...	...	31	3	3	7	18
1930	...	...	...	27	1	2	6	18
1931	...	...	...	34	5	1	14	14
1932	...	...	...	54	1	1	21	31
1933	...	...	...	60	2	1	25	32
1934	...	...	...	37	—	—	17	20
1935	...	...	...	51	5	—	15	31
1936	...	...	...	35	—	—	14	21
1937	...	...	...	13	1	—	6	6
1938	...	...	...	24	3	3	3	15

Trachoma Dispensary.—The trachoma clinic was attended by 118 individuals during the year, the total number of attendances being 3,384, of which 1,139 were consultations with the ophthalmic surgeon and 2,245 were for treatment by the nurse. There were a few operations at the dispensary but it has been found more satisfactory to admit patients requiring operative measures to hospital for treatment.

Hospital Treatment.—There were 13 cases of trachoma admitted to Stobhill Hospital during the year. Seven of these cases were admitted for the first time, while 6 were re-admissions. Dr. Spence Meighan in the course of his report points out that there has been an increase in the number of admissions during the year to the Trachoma Wards of Stobhill Hospital. This was due to the fact that for the successful treatment of the disease, constant and regular application of the various remedies is necessary. In many cases it was found difficult to attain this object at the Outdoor Dispensary, owing to the irregular attendance of the patients in many instances. It was found that when the patients were persuaded to enter hospital their condition greatly improved. Therefore this form of treatment was carried out in as many cases of this type as possible. The other type admitted to hospital were those requiring lid operations for the various deformities produced by the disease. These operations in all cases produced at least alleviation of the condition.

MALARIA.

Malaria.—In 1938 the number of cases recorded was 11, of which 5 were removed to fever hospitals. All were males and no cases occurred under 25 years of age.

DYSENTERY.

The number of registered cases of dysentery was 262. There was thus a continuance of the relatively high prevalence of the previous two years when the annual totals reached new maxima of 239 and 275 respectively. The quarterly incidence was as follows:—

	1st Quarter.	2nd Quarter.	3rd Quarter.	4th Quarter.	Total.
Home infections ...	60	48	27	21	156
Institutional infections,	61	14	22	9	106

The incidence, therefore, subsided in the second half of the year. The large number of institutional cases registered in the first quarter was due to the prolongation from the end of 1937 of two institutional outbreaks already described in last year's Report.

The age distribution of the cases and their fatality were as shown:—

		—1	—5	—15	—55	55+	Total.
Home Infections	... ..	1	35	39	66	15	156
Institutional Infections	... ..	6	20	5	37	38	106
Deaths from Dysentery	... ..	—	—	1	3	1	5

It will be noted that children aged 1-15 again formed almost half the total of home cases. The mortality rate was fortunately low. During recent years the dysentery mortality rate for notified cases has been:—1927-1934, 5.2 per cent.; 1935, 3.7 per cent.; 1936, 6.7 per cent.; 1937, 3.3 per cent.; 1938, 2.3 per cent.

OTHER INFECTIOUS DISEASES.

A record of the other infectious diseases dealt with, together with the number of each treated in hospital, is given in Appendix Table XVII. Among these are included ophthalmia neonatorum and various forms of pneumonia, which are dealt with in other sections of the Report. There remain certain other diseases which are here briefly referred to.

ANTHRAX.

Anthrax in Human Beings.—There were three cases of anthrax in human beings during the year.

Two of these cases occurred among the employees of a firm engaged in the manufacture of animal fertilisers and feeding stuffs, the raw materials of which are imported from India. There was a lapse of over a month between the two cases, both of which developed a typical malignant pustule on the forearm. Both cases were removed to hospital where they made rapid and uneventful recovery. The other employees were kept under observation for possible contacts but no other case occurred. Samples of the various materials used in manufacture of the feeding stuffs, as also samples of the sacking of the bags in which these were stored, were submitted for bacteriological analysis with negative results. The method of manufacture and working conditions were reviewed but the source and manner of the infection remain undiscovered.

The other case was that of a woman worker employed as a twister of hair with a firm of bedding manufacturers. The hair used is horse and hog hair imported from South America and U.S.A. respectively and large quantities are dealt with each month. It is not certain that the horse hair receives any preliminary treatment before shipment but the hog hair is dyed and possibly washed. Both kinds are of very fine quality and exceptionally clean. The girls in the Twisting Department work with the raw material which they convert into ropes, prior to its being washed. The patient was admitted to the Royal Infirmary with a swelling of the left side of the face. This was incised but the condition persisted and on bacteriological examination an anthracoid organism was discovered. The girl was removed to Ruchill Hospital for treatment but diagnosis of anthrax was not confirmed. There was no previous case of anthrax among the employees and no other illness following this case.

Anthrax in Animals.—Two cases of anthrax occurred at farms on the outskirts of the City. The two animals were destroyed and the premises disinfected. Vague illness in a worker at one of the farms aroused suspicion of a possible contact with the infected animals but on removal to hospital the illness was found to be attributable to other causes.

Hide Bindings on Orange Boxes.—Owing to events in Spain imports from that country ceased during 1938.

DIARRHOEA AND ENTERITIS.

The mortality from these digestive disorders was less heavy in 1938, 350 deaths being recorded, compared with 435 during the preceding year.

AGE IN YEARS.

			—1	—5	5+	Total.
1934,	...	...	211	31	37	279
1935,	...	...	280	24	59	363
1936,	...	...	432	49	55	536
1937,	...	...	349	31	55	435
1938,	...	...	279	31	40	350

The highest ward mortalities, per million of the population, from diarrhoea among children under two years of age, were 861 in Exchange, 625 in Mile-end, 593 in Kinning Park, 577 in Gorbals, and 569 in Anderston. The average for the City was 270.

The table which follows shows the mortality in each month of the year, and indicates that children are more vulnerable during the autumn months:—

DIARRHŒA AND ENTERITIS.

Month of Death.	Number of Deaths —1 Year.	Mean Temp.	Month of Death.	Number of Deaths —1 Year.	Mean Temp.
Jan., ...	22	39	July, ...	30	58
Feb., ...	13	40	Aug., ...	19	58
March, ...	11	47	Sept., ...	20	55
April, ...	13	46	Oct., ...	27	48
May, ...	42	49	Nov., ...	22	45
June, ...	37	55	Dec., ...	23	38

RABIES.

No case of rabies is known to have occurred, but a number of persons bitten by dogs were reported by the police for inquiry. These are shown in relation to the season of occurrence and the severity of the bite:—

						Slight.	Serious.
1st Quarter, ...	...	...	...	...	...	62	5
2nd Quarter, ...	...	...	...	...	...	119	7
3rd Quarter, ...	...	...	...	...	...	125	3
4th Quarter, ...	...	...	...	...	...	67	2
						373	17
						390	
1937, ...		464		1936, ...		379	

In addition to the above, 10 persons were bitten by horses and 8 by cats.

INFECTIVE JAUNDICE.

One case of infective jaundice occurred during the year.

SECTION V.

RESPIRATORY DISEASES.

PNEUMONIA AND INFLUENZA, ETC.

During the year 1938, there were 1,738 deaths from disease of the respiratory system, compared with 2,705 for the preceding year, a reduction of 967. Part of this striking fall is accounted for by the absence of influenza and influenzal pneumonia which in 1937 accounted for 496 deaths during January and February.

The death rates per million of the population for pneumonia was 1,027, for influenza, 76, and for other respiratory diseases, 494, these rates being the lowest yet recorded. The respective rates for 1937 were 1,378, 443 and 595. The total respiratory death rate, 1,540 per million, is 25 per cent. below that for any previous year. This considerable reduction during a year when the weather conditions were rather inclement is described in the Meteorological Notes in Section I of this report. The chart on the following page has been prepared to show the varying death rates for the four principal groups of respiratory disease during the past quarter of a century.

The quinquennial average of the total respiratory death rate during the past 25 years has been as follows :—

1914-18	...	...	...	...	3,415
1919-23	...	...	...	...	3,417
1924-28	...	...	...	...	2,818
1929-33	...	...	...	...	2,733
1934-38	...	...	...	...	2,103

Thus the death rate due to respiratory diseases as a group is showing a gradual tendency to fall.

The following table has been prepared to show the ages of life that are most affected by the pneumonias, the figures referring to the past three years.

DEATHS FROM ALL RESPIRATORY DISEASES
(including Influenza).

	—1	—2	—5	—10	—15	Ages		—25	—35	—45	—55	—65	—75	75+	All Ages
MALES—															
1936 ...	332	109	44	9	5	15	17	63	110	179	203	195	125	1,406	
1937 ...	319	87	21	18	4	13	21	65	137	228	248	201	145	1,507	
1938 ...	249	80	26	6	8	9	12	48	74	135	140	109	94	990	
FEMALES—															
1936 ...	272	103	30	16	3	10	17	32	49	64	72	180	186	1,034	
1937 ...	266	80	34	12	5	16	19	53	67	79	146	187	234	1,198	
1938 ...	215	67	32	7	5	5	16	14	38	40	63	106	140	748	

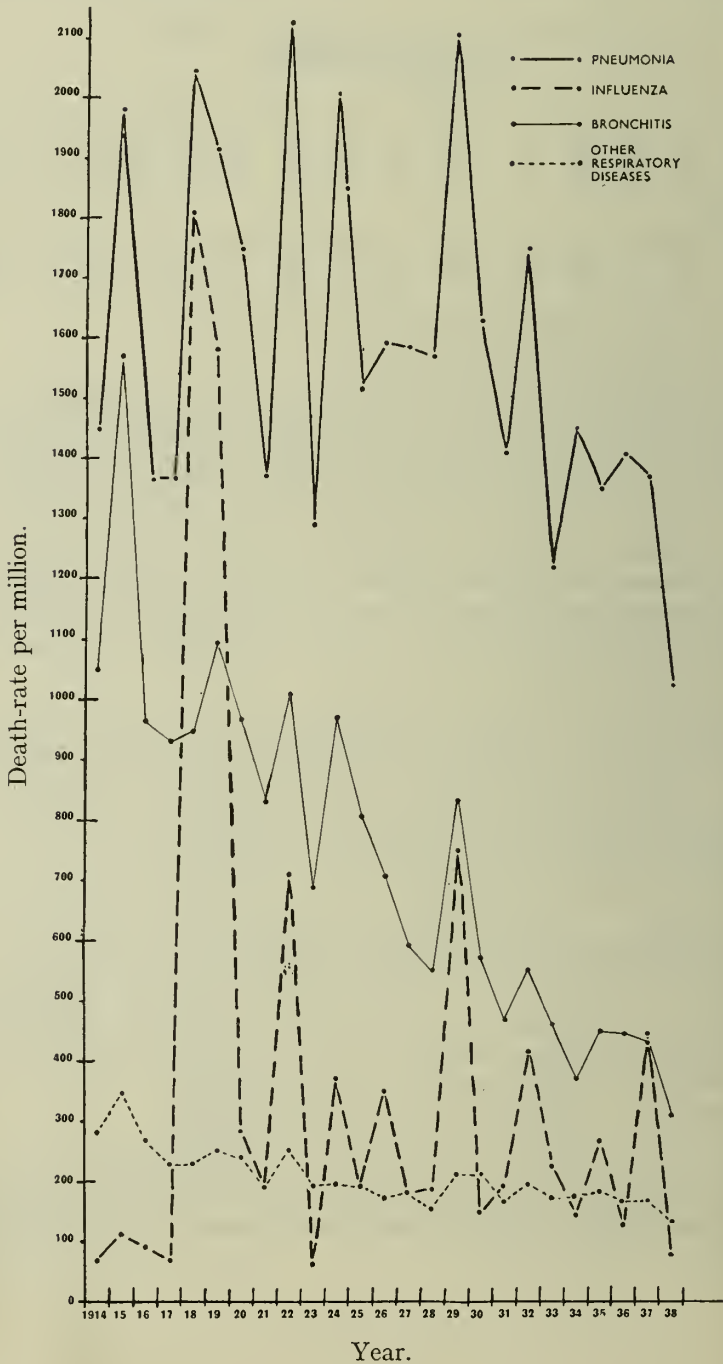
The principal reductions are shown to have occurred in the first year of life and from 35 years of age upwards.

Many factors influence mortality from respiratory diseases, but past experience shows that cold weather associated with fog is the one to be most dreaded. The year passed without such an experience. Glasgow, for climatic reasons, has always had a higher incidence and mortality from pneumonia than districts further south. The association of humidity with inclement conditions would appear to be more inimical to health here than in towns to the east or north-east. In 1938 the rainfall was the heaviest ever recorded, but the presence of so much cloud had the effect of equalising the temperature for, generally speaking, the temperatures during the cold months were above, and those during the warm months below the usual average.

From the chart given on the following page showing the death rate per million from the various principal groups of respiratory disease several important facts may be noted. Pneumonia in all its manifestations now forms by far the largest proportion of the total deaths from disease of the respiratory system. Prior to 1914, there had been a continuous reduction over a considerable number of years, but the classification of deaths was probably not sufficiently accurate to compare the relative improvement of the various sections in this large group of deaths. The chart shows that during the quarter of a century, 1914 onwards, there were considerable fluctuations in the pneumonia death rate between rates of 1,300 and 2,100, and during the present decennium, 1930 onwards, the death rate has declined appreciably with smaller fluctuations from year to year. Influenza still shows considerable variations at much lower rates (100 to 700), but it should be remembered that this disease is usually prevalent over short periods of a month or two during every second or third year.

The death rate from bronchitis, however, shows a regular improvement during the past twenty-five years, the rate having fallen from over 1,500 to about 300, while the death rate from other forms of respiratory disease has fallen only slightly from a little above to just under 200 per million of the population.

GLASGOW: Chart showing Death-rates per million from RESPIRATORY DISEASES 1914-38.



TUBERCULOSIS

By Dr. W. A. Horne.

There was an increase of 94 in the pulmonary tuberculosis notifications during the year, the figure being 1,748 as compared with 1,654 in 1937. Much of this increase is due to the notification of pulmonary tuberculosis in children under ten years of age, the rest of the increment being females in the 25-35 age group and males over 35 years of age. As will be seen from the following table there was a slight reduction in the number of cases of young adult phthisis of both sexes.

			1933.	1934.	1935.	1936.	1937.	1938.
Male	...	...	221	207	229	242	239	235
Female	...	...	280	320	306	340	370	342
Total	...	...	501	527	535	582	609	577

The age distribution table emphasises the difference in the incidence of the disease in the sexes.

		-5	-10	-15	-20	-25	-35	-45	-55	-65	+65	Total.
Male	...	47	48	40	124	111	168	164	153	92	28	975
Female	...	31	28	39	195	147	200	57	40	24	12	773

In the male the incidence of young adult phthisis is not as great as in the female, but the curve is maintained at a high level right into the fifties. In the female, on the other hand, the disease is very prevalent between the ages of 15 and 35, giving a high peak to the curve, but thereafter it falls away rapidly to a comparatively low level. It has been suggested that the reason for this curious difference is, in the case of the female, the physiological upset connected with puberty and child-bearing between the ages of 15 and 35 years, and, in the case of the male, the hard physical labour and mental strain which is their lot during the age periods 15 to 65 years. It is the custom for the male to continue working up to the age of 65, a practice unusual in the case of the female.

During the coming year it is proposed to conduct an investigation into the possible predisposing factors in the onset of phthisis in young adults, and it is hoped to include a summary of the analysis in the next report.

At the end of 1938 there were 5,713 patients suffering from phthisis on the life register. Of this number 2,810 or 49·2 per cent. had tubercle bacilli in the sputum. This compares with 50·3 per cent. in 1937.

Mortality Statistics.—There were 960 deaths from pulmonary tuberculosis during the year, an increase of 5 over the number for the preceding year. Of this number 584, or 60·8 per cent. died in institutions. The death rate from pulmonary tuberculosis remains almost constant at 0·851 per thousand.

The following table shows the position during the past 50 years.

GLASGOW—DEATH-RATES FROM PULMONARY TUBERCULOSIS.

1881-1890	...	2·680 per 1,000	1930	...	...	0·805 per 1,000
1891-1900	...	2·015	1931	...	...	0·865
1901-1910	...	1·533	1932	...	...	0·890
1911-1915	...	1·346	1933	...	...	0·824
1916-1920	...	1·191	1934	...	...	0·783
1921-1925	...	1·036	1935	...	...	0·868
1926	...	0·876	1936	...	...	0·874
1927	...	0·869	1937	...	...	0·853
1928	...	0·876	1938	...	...	0·851
1929	...	0·941				

A comparison between the death rate in Glasgow and other large towns is shown below.

PHTHISIS DEATH-RATES PER 100,000 IN CERTAIN TOWNS.

	1931.	1932.	1933.	1934.	1935.	1936.	1937.	1938.
Glasgow	87	89	82	78	87	86	85	85
Edinburgh	70	70	70	70	57	61	64	60
Dundee	73	61	58	54	67	60	57	62
Aberdeen	69	46	54	52	40	40	40	38
London	90	82	82	76	68	69	71	64
Liverpool	115	112	116	100	94	82	79	77
Manchester	112	100	100	97	92	87	88	83
Birmingham	91	83	85	71	71	71	72	72

Tuberculosis Administration.—The tuberculosis clinic forms the nucleus of the administration of the anti-tuberculosis scheme. It acts as a clearing house, where new patients are examined, old cases assessed, and doubtful ones kept under observation. Attached to each dispensary are a Tuberculosis Officer and a number of health visitors. The health visitors are a most important section of the staff. To them falls the duty of visiting the homes of the patients, assisting and advising them as to the proper way to live. During 1938, health visitors paid 53,358 domiciliary visits in the course of their duties, an increase of 224 over the figure for 1937. To the dispensary came 3,378 new cases, an increase of 67 over 1937, and there were 48,529 subsequent attendances.

Housing Conditions.—Still fewer houses were available for the rehousing of tuberculous families during the year. Recommendations continue to be made to the City Improvements Department, the figure for this year being 292. Of this number 35 were rehoused during the year, to which have to be added those recommended in previous years and rehoused in 1938, making 100 in all, which compares adversely with 125 in 1937, 182 in 1936, and 278 in 1935.

Institutional Provision.—Owing to the increasing incidence of the disease, additional accommodation was obtained by converting one of the fever wards in Ruchill Hospital into a female phthisis ward. This has led to a considerable diminution in the female waiting list. The admissions to the various hospitals and sanatoria are shown in the following table :—

Year.				Local Authority Hospitals.	Sanatoria.	L. A. General Hospitals.	Total.
1926	...	...	...	1,637	425	738	2,800
1927	...	...	...	1,458	413	615	2,486
1928	...	...	...	1,429	418	819	2,666
1929	...	...	...	1,501	494	753	2,748
1930	...	...	...	1,762	608	549	2,919
1931	...	...	...	2,188	477	289	2,954
1932	...	...	...	1,981	457	411	2,849
1933	...	...	...	1,906	350	503	2,759
1934	...	...	...	1,800	351	412	2,563
1935	...	...	...	1,944	424	447	2,815
1936	...	...	...	2,047	359	334	2,740
1937	...	...	...	2,032	369	331	2,732
1938	...	...	...	2,069	320	324	2,713

Collapse Therapy.—Baird Street Pneumothorax Centre continues to do very valuable work. In collapse therapy we have one sure method of treating pulmonary tuberculosis with a reasonable expectation of success. It is the practice to investigate each new case with a view to collapse therapy, and this has led to a gradually increasing attendance at Baird Street Centre. The following figures show the position at the end of 1938.

Refills.	Aspirations.	Screened.	New Cases.		Abandoned.		No. Attend- ing at 31/12/38
			M.	F.	M.	F.	
3,410	34	4,185	56	66	13	17	377

Non-Pulmonary Tuberculosis.—The number of new cases of non-pulmonary tuberculosis with the location of the disease and the age incidence is shown in Tables A and B.

TABLE A.
SHOWING NON-PULMONARY TUBERCULOSIS CASES REGISTERED
WITH LOCATION OF DISEASE AND SEX.

Year.	Glands.		Bones and Joints.		Abdomen.		Meninges.		Multiple.		Others.		Total.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1917	203	266	196	170	155	113	93	95	41	34	70	57	758	735
1918	186	265	158	143	119	128	92	107	34	30	78	72	667	745
1919	138	178	164	127	126	123	93	86	40	29	56	47	617	590
1920	138	145	193	168	116	112	89	83	39	29	44	29	619	566
1921	149	171	165	127	116	84	78	74	27	29	68	53	603	538
1922	134	147	141	124	130	111	75	66	20	24	42	36	542	508
1923	145	155	181	129	145	118	102	75	16	15	78	75	667	567
1924	149	150	145	130	140	144	104	81	35	36	65	42	638	583
1925	145	137	150	139	131	114	75	65	29	24	54	52	584	531
1926	135	137	142	131	115	109	78	57	24	35	35	33	529	502
1927	131	148	186	134	127	106	89	61	22	17	45	35	600	501
1928	132	152	150	138	113	99	84	86	20	10	61	62	560	547
1929	117	154	138	107	109	104	86	85	10	12	38	32	498	494
1930	111	130	124	130	129	117	98	116	9	7	44	32	515	532
1931	101	139	137	115	101	99	90	87	12	14	50	31	491	485
1932	98	141	134	104	114	105	92	68	6	9	48	38	492	465
1933	99	103	115	109	83	70	59	56	12	8	44	37	412	382
1934	64	106	98	93	64	68	51	52	5	3	44	29	326	351
1935	82	84	107	74	54	62	70	70	9	2	34	26	356	318
1936	69	83	120	83	73	65	90	65	5	7	30	21	387	324
1937	73	91	88	73	60	60	65	62	6	2	39	23	331	311
1938	72	64	133	103	45	63	80	77	4	1	30	28	364	336

TABLE B.
AGE-DISTRIBUTION OF NON-PULMONARY TUBERCULOSIS CASES
REGISTERED DURING EACH YEAR.

Year.	Under 1 year.		1-5 years.		5-10 years.		10-15 years.		Over 15 years.		Total.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
1917	52	48	190	134	157	156	117	149	242	248	758	735
1918	30	33	163	169	137	125	129	142	208	276	667	745
1919	45	28	151	109	142	123	78	136	201	194	617	590
1920	57	35	143	122	128	137	110	94	181	178	619	566
1921	51	35	157	111	133	122	81	94	181	176	603	538
1922	38	28	175	150	103	87	71	79	155	164	542	508
1923	59	19	214	165	116	112	86	79	192	192	667	567
1924	50	39	212	171	96	99	103	85	177	189	638	583
1925	48	22	184	144	111	103	71	77	170	185	584	531
1926	28	22	162	127	109	88	63	78	167	187	529	502
1927	31	28	171	102	130	82	73	77	195	212	600	501
1928	29	17	152	104	115	112	83	60	180	255	559	548
1929	32	27	132	102	111	95	63	66	160	204	498	494
1930	31	27	145	137	116	124	62	74	161	170	515	532
1931	26	17	126	106	101	97	67	71	171	194	491	485
1932	20	18	130	80	94	78	72	75	176	214	492	465
1933	15	18	79	60	94	81	65	61	159	162	412	382
1934	14	11	72	58	66	65	61	48	113	169	326	351
1935	13	9	74	58	67	54	56	50	146	147	356	318
1936	22	7	108	70	64	47	53	39	140	161	387	324
1937	19	10	72	62	53	42	51	54	136	143	331	311
1938	13	13	92	55	68	44	45	49	146	175	364	336

As in the case of pulmonary tuberculosis there has been an increase in the incidence of the non-pulmonary form of the disease, the figures for the year showing an increase of 58 over the corresponding figure for 1937. Much of this increase is due to the greater incidence of tuberculosis of bones and joints and meninges, the two groups that showed an improvement in 1937. From Table B it will be seen that most of the increase has occurred in the age period over 15 years and predominantly in females.

Tuberculosis of the Skin.—The new Finsen-Lomholt Clinic for the treatment of lupus is now in running order and the results of treatment are well up to expectations. A full report on the subject will be found in the Actinotherapy Section.

The following table shows the death rate per million of the population from non-pulmonary tuberculosis from 1906, with the rates for tuberculous meningitis and abdominal tuberculosis shown separately. The rise in the incidence has been accompanied by a rise in the death rate, mainly due to the increase in the number of deaths from tuberculous meningitis.

GLASGOW.—DEATH-RATE PER MILLION OF THE POPULATION.

Year.		Tuberculous Meningitis.	Abdominal Tuberculosis.	Other Forms.	Total.
1906-1910	...	416	278	255	949
1911-1915	...	285	197	183	665
1916-1920	...	210	167	170	547
1921-1925	...	163	103	122	388
1926	...	142	69	106	317
1927	...	148	62	103	313
1928	...	148	59	110	317
1929	...	140	64	99	303
1930	...	182	51	104	336
1931	...	153	55	110	318
1932	...	134	46	89	269
1933	...	96	44	106	246
1934	...	100	31	85	216
1935	...	116	30	69	215
1936	...	144	32	84	260
1937	...	108	31	72	211
1938	...	133	26	83	242

BAIRD STREET ACTINOTHERAPY CLINIC.

By Dr. Alex. Maclean.

Three events in 1938 had a considerable influence on the work of this clinic. These were, in order of time, the introduction of three Finsen-Lomholt lamps, the complete rewiring of the electrical installation, and the conversion of the greater part of the main supply of electricity to Baird Street Hospital from direct to alternating current.

The first of these measures represents the equipment of the clinic with the most modern method for treatment of tuberculosis of the skin. The three Finsen-Lomholt lamps form the nucleus of a part of the Actinotherapy Clinic which has been specially set aside as a Lupus Clinic and is situated on the top floor of the building in a Treatment Room which adjoins the Medical Consultation Room, while the third room on this floor now serves as a general waiting room. The Treatment Room has been provided with a water-supply which is independent of that in the remainder of the building in that it comes from a special water tank under the roof; this is important because the lamps require a constant circulation of running cold water to keep them cool; they tend to become hot with use when damage to their quartz cylinders may occur. Further, the special requirements of the lamps as regards current and potential have necessitated the installation in the treatment room of a resistance box and of an instrument panel, embodying voltmeter, ammeter and switches for each lamp, and the provision of a motor generator in the basement of the Hospital for conversion of the alternating current to direct current. Some alterations have been made in the Medical Consultation Room itself to fit it for use, in addition, as a dark room and as a studio for photography; for these purposes a Kodak clinical camera, movable lamp-standards and developing equipment have been acquired.

The Finsen-Lomholt lamp is the latest modification of the original open carbon arc lamp first introduced in Denmark by Finsen nearly half a century ago for the treatment of skin diseases. Its particular value in the treatment of lupus vulgaris appears to lie in three main features. The first of these is that, by means of solutions of cobalt sulphate and copper sulphate through which the radiation is made to pass, it transmits only those rays in the ultra-violet range which have a remedial effect on lupus. The second is that, because the lamp retards rays such as the infra-red rays and the other ultra-violet rays which have a burning effect on the skin during their action, it is possible for the area under treatment to be brought much closer to the actual source of the rays than formerly, and therefore to receive a more intensive irradiation. The third is that the construction of the lamp allows of pressure on the skin at the site of treatment, thus displacing blood, which is responsible for absorption of a large proportion of ultra-violet rays from the surface vessels of that region, thus enabling a fuller utilisation of the curative rays. Altogether, a more effective treatment of the diseased area in a much shorter time is achieved than has hitherto been possible.

The normal duration of treatment to each area is one hour but a patient may on the same day receive treatment to one or two neighbouring areas in succession. The area treated during one exposure varies in size from that of a shilling downwards, according to the size of the quartz applicator employed with the lamp. The initial treatment is painless. It is followed about fourteen hours later by blister-formation, when there may be some tenderness, and later still by a break in the skin surface. This is treated on ordinary antiseptic principles and the raw surface begins to heal. The whole process, until the surface is whole again, takes about a fortnight. At a judicious moment depending on how much growth of skin has occurred and usually between eight and fourteen days after the preceding treatment the irradiation of each area must be repeated. Thereafter, the same procedure is followed until at least eight successive exposures have been given. It is often found that a complaint of slight ache or of a feeling of "pins and needles" in the treated area is made during treatments subsequent to the initial one, but any pain produced is less than that caused by older methods of treatment and is, indeed, immeasurably less than with the application of caustics; some inflammatory swelling and a mild lymphadenitis are not infrequent after these later treatments but subside in a few days. The result, after a course of treatment in patients with lupus of recent onset and, therefore, with a minimum of scarring, is to leave the skin practically normal in appearance and even in patients with old-standing lupus perhaps much cicatrized from other methods of treatment, to leave a soft pliable scar in which lupus nodules cannot be detected.

It is much too early in our experience at Baird Street to draw any conclusions as to the permanency of the results obtained by the use of the new lamps, but the initial results have been extremely satisfactory. For instance, in several patients, areas have been treated which have thereafter remained free from obvious nodules and in others the advance of the lupus towards an important organ such as the eye has been stopped. The present policy is to use the new lamps as much as possible for treatment of lupus of the face and to employ other methods, such as applications of pyotropin, for lupus of the trunk and limbs where the skin is less sensitive to pain and the cosmetic result is less important.

By the end of 1938, 1,208 separate treatments had been given from the three lamps, two having been working from August and the third from the date of its installation in October.

The Lupus Clinic was then in operation each week from Monday till Thursday, inclusive, from 9 a.m. till 5 p.m., and on Friday from 9 a.m. till 1 p.m., while Friday afternoon was utilised for the delicate operations

of cleaning the lamps and of renewing the filtering solutions and, also, in obtaining photographic records of the patients. It is proposed, early in 1939, to institute evening sessions on Mondays and Wednesdays for the benefit of patients who are working during the day.

The second event which influenced the work of the Clinic in 1938 was the complete rewiring of the electrical installation. This, together with minor structural alterations which it made necessary and with replastering and repainting of walls, caused an interruption in the general work of the clinic from the beginning of September till the end of December. Happily, the Lupus Clinic was in action by that time and the members of the staff were able to obtain a thorough knowledge of the manipulation of the Finsen-Lomholt lamps without the distraction entailed by conducting the general clinic. The patients during the last four months of the year were referred for observation each to the appropriate Tuberculosis Dispensary.

The third event, *i.e.*, the change-over of the building to alternating current as its main source of electrical supply, affected the Actinotherapy Clinic only as regards that part of the clinic which was housed on the ground floor and which was used for the most part in the evenings for male workers. The eight 20-ampere Crompton arc lamps which were on this floor are estimated to be of a type which is about twenty-five years old; it would require an exorbitant sum to make them suitable for alternating current and they should be replaced by four alternating current carbon arc lamps. Until this apparatus is installed, there will be difficulty in giving adequate treatment in the evenings and it will probably be necessary to ask male and female patients (workers and school-children) to attend the clinic on alternate evenings.

Direct current has been retained for that part of the general clinic which is situated on the top floor. The apparatus here now consists of six 30-ampere Westminster carbon arc lamps, one Hanovia "Alpine Sun" lamp, and two Kelvin, Bottomley and Baird lamps, *viz.*, an atmospheric 3.5 ampere lamp and a "Uviation" lamp. A Kelvin, Bottomley and Baird 7-ampere 500-volt lamp, which has been part of the equipment but which has not been used to any extent since tuberculous in-patients were transferred from Baird Street Hospital to Mearns Kirk Hospital on the opening of the latter, has now been dismantled; it has not been well suited to the more casual nature of the clinic since it became solely used for out-patients.

The number of patients attending the Actinotherapy Clinic at the end of 1938 was 166, as compared with 141 at the end of 1937.

The results of treatment in 128 patients who were dismissed from the clinic during 1938 are summarised in the following table, which does not include details of six patients who had less than one month's treatment. In the table, the expression "healed" refers not only to firm healing but also to exceptional improvement, the expression "improved" implies distinct improvement, and the expression "not improved" includes both absence and poorness of a favourable response to treatment.

	Number of Patients.			Total.	Average Duration of Treatment in Months.		
	Healed.	Improved.	Not Improved.		Healed.	Improved.	Not Improved.
Superficial Adenitis	79	17	1	97	6.6	8.6	1.0
Lupus Vulgaris ...	3	3	2	8	61.3	39.3	2.0
Abdominal							
Tuberculosis ...	1	2	—	3	11.0	2.5	—
Bone and Joint							
Tuberculosis ...	2	1	1	4	17.0	3.0	3.0
Other Tubercular							
Conditions ...	1	1	—	2	3.0	3.0	—
Miscellaneous—							
(a) Hilum Adenitis	1	2	—	3	6.0	4.0	—
(b) Bronchitis ...	2	1	—	3	6.0	2.0	—
(c) Others ...	3	3	—	6	3.7	3.3	—
	93	31	4	128			

Superficial Adenitis.—97 cases of superficial adenitis, or 75.8 per cent. of the whole, were dismissed during 1938. The result was "healed" in 79 patients, of whom in 23 cases the glands had remained hard and in 56 cases there had been abscess-formation; of the latter, 3 had undergone resolution, 7 had healed after aspiration of pus, 18 had been incised, and in 28 there had been spontaneous sinus formation. The result was "improved" in 17 patients, of whom in 7 cases the glands had remained hard, and in 10 cases there had been abscess formation; of the latter, 3 had resolved, 3 had acquired aspiration, and in 4 there had been spontaneous sinus formation. The patient in the "not improved" group had a massive cervical gland enlargement with sinus formation which, it was found, did not improve with out-patient treatment: the patient, accordingly, was admitted to hospital.

Lupus Vulgaris.—8 cases of lupus, or 6.3 per cent. of the whole, were put off treatment in 1938. 3 of these were regarded as "healed," no fresh nodules having been noted in extensive scars for at least a year before the time of dismissal; 3 cases were "improved" but still had

active nodules; 2 cases were "not improved" but in 1 of these the patient was given hospital treatment partly because of the lupus and partly because of an extremely debilitated general condition. With this exception the cases in the last two groups stopped treatment of their own accord. Two other patients were temporarily absent during the year as a result of requiring radium treatment for epitheliomatous degeneration in their facial lesions; both returned to the clinic considerably improved and in one case with the malignant element completely absent. None of the patients mentioned in this paragraph was given local treatment by the Finsen-Lomholt lamps.

Abdominal Tuberculosis.—3 cases of abdominal tuberculosis, or 2·3 per cent of the whole, were dismissed in 1938. All had received treatment for its general tonic effect and marked improvement in one case and distinct improvement in the other two cases had followed.

Tuberculosis of Bones and Joints.—4 cases of this condition, or 3·1 per cent. of the dismissals, left the clinic in 1938. 2 cases were healed, one of these being a case of spinal caries who attended the clinic after a period of institutional treatment and the other was a case in which recurrence of sinus-formation had occurred after apparent healing of a tuberculous ankle-joint; 1 case was improved in which treatment was given for a recurrent sinus associated with an ankylosed knee-joint and 1 case was "not improved" in which there was disease of a rib with sinus-formation.

Dactylitis.—No cases of this condition were dismissed during the year.

Other Tubercular Conditions.—2 cases, 1·6 per cent. of the whole, came into this category. One case, in which there had been a long-standing sinus in the lumbar region, was healed; the other case, one of chronic tubercular empyema, was improved.

Miscellaneous.—Three cases of hilum adenitis and three cases of bronchitis were dismissed during 1938. The other six cases mentioned in the table consisted of five cases of general debility and of one case of streptococcal abscess of the thigh which rapidly healed with treatment at the clinic. With the exception of the last case all the cases in the miscellaneous category were contacts of tubercular patients.

X-RAY WORK.

The following table shows the amount of work done at the various institutions :—

Institution	Number of Patients Skiagraphed.		Number Skiagraphs taken.	Number of Screen Ex- aminations only.	Total Patients.
	Indoor	Outdoor			
Ruchill ...	2,039	6,069	9,213	2,115	10,223
Robroyston ...	1,218	—	2,627	500	1,718
Mearnskirk ...	1,829	—	3,977	45	1,874
Bellefield ...	160	—	265	1,060	1,220
Baird Street	—	—	—	4,185	4,185

During the past year new equipment has been installed at Bellefield, Robroyston and Ruchill Hospitals.

At Ruchill and Robroyston tomographic apparatus has been added and has proved of great value in difficult cases. By this device it is possible to X-ray a layer of tissue at a particular depth, the rest of the body thickness being "blurred out of focus" by movement. Accordingly, it is possible to X-ray the dorsal spine without the shadows of the ribs being superimposed and it is possible to get films showing the broncho-vascular tree in the lungs at different levels without rib shadows confusing the picture. By this means it has been possible to show lung lesions which were hidden by ribs, etc., in the ordinary films and to demonstrate cavities which were not visible in films taken in the usual way. In cases where a lung lesion was suspected on clinical grounds and where a negative X-ray result was obtained, tomographic films have proved most helpful in enabling a correct diagnosis to be reached.

The recent improvements at Ruchill and Robroyston Hospitals have made the equipment at these institutions completely shockproof and have eliminated a source of danger to the patients. A similar improvement is contemplated at Mearnskirk where the large number of young children requiring to be X-rayed makes this change imperative.

SECTION VI.

VENEREAL DISEASES.

By Dr. W. A. Horne.

Only slight variations have occurred in the incidence of venereal disease during the past year. Although there has been a decrease of 65 in the number of new cases of acute syphilis there has been an increase of 81 in the number of cases of acute gonorrhœa. The marked rise in the incidence of soft sores in 1937 has not been maintained, and the figures for the present year are down by 50 per cent. The very favourable figures for congenital syphilis continue, but there has been a rise in the incidence in children under one year, there being 53 new cases in 1938 compared with 36 in 1937. This year's figure is more in line with the trend than the exceptionally low figure prevailing in 1937.

Table A shows the incidence of the various types of the disease treated at the *ad hoc* and other centres. In addition to the points already noted there has been a fall of 25 per cent. in the total attendances, largely contributed to by the use of "M. & B. 693" in the treatment of gonorrhœa. There has also been a decided decrease in the number of in-patients, there being some 59 fewer patients admitted in 1938 as compared with 1937.

TABLE A.

NEW PATIENTS ADMITTED TO THE VARIOUS TREATMENT CENTRES
IN 1938.

OUT PATIENTS :—		Sex.	Primary Syphilis	D.G. + W.R. —	Primary Syphilis W.R. +	Secondary Syphilis.	Latent Syphilis (1st year).	All Later Stages.	Congenital Syphilis.	Extra-genital Infection.	Acute Gonorrhoea.	Chronic Gonorrhoea.	Soft Chancre.	Non-Specific Venereal Infection.	Other than Venereal.	Total.	Aggregate
<i>Ad Hoc Centres—</i>																	
<i>Male—</i>																	
Black Street, Broomielaw, and Bellahouston ...	M.	66	83	64	6	131	5	5	1,393	101	93	702	736	3,385	71		
<i>Female—</i>																	
Baird Street and Govan ...	M.	—	—	—	—	—	4	—	—	—	—	—	—	5	9		
	F.	1	18	19	1	56	14	2	134	22	1	101	60	429	12		
<i>Other Centres—</i>																	
Lock Hospital	M.	—	—	—	—	—	6	—	—	—	—	—	—	7	13		
	F.	—	13	23	—	62	23	1	3	190	—	—	—	28	343	11	
Western Infirmary	M.	2	3	3	1	50	2	1	—	—	—	—	2	5	16	85	4
	F.	2	4	11	—	18	8	2	15	—	1	42	11	114	4		
Victoria Infirmary	M.	—	—	3	1	10	6	—	3	—	—	—	1	4	28		
	F.	—	3	3	—	6	2	—	—	1	—	—	2	5	22		
Eye Infirmary	M.	—	—	—	—	13	8	—	—	—	—	—	—	—	21	2	
	F.	—	—	—	—	15	11	—	—	—	—	—	—	—	26	2	
Royal Hospital for Sick Children ...	M.	—	—	—	—	—	5	—	—	—	—	—	—	45	50		
	F.	—	—	—	—	9	3	—	—	—	—	—	—	30	42		
<i>Ante-Natal Centres—</i>																	
Maternity Hospital	M.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	F.	1	—	—	—	16	3	—	2	—	—	—	70	9	101		
Child Welfare Clinics ...	M.	—	—	—	—	—	4	—	—	—	—	—	—	—	4		
	F.	—	3	—	—	49	5	—	1	—	—	205	2	265			
Total No. of Out- Patients ...			72	127	126	9	435	109	11	1,551	314	97	1,128	958	4,937	11	
IN-PATIENTS :—																	
Belvidere Hospital	M.	—	6	5	1	3	—	—	30	—	5	1	3	54			
Lock Hospital ...	M.	—	—	—	—	—	9	—	—	—	—	—	8	17			
	F.	—	5	12	—	9	12	—	2	99	—	—	8	147			
Other Institutions	M.	—	—	—	—	10	6	—	—	—	—	—	1	—	17		
	F.	—	—	—	—	10	5	—	—	—	—	—	2	—	17		
Total No. of In- Patients ...			—	11	17	1	32	32	—	32	99	5	4	19	252		
Grand Total ...			72	138	143	10	467	141	11	1,583	413	102	1,132	977	5,189		

Table A is summarised as follows:—

	<i>Ad Hoc</i> Treatment Centres		Glasgow : All Centres.
	Males.	Females.	
Acute Syphilis (includes Primary, Secondary, and Latent in the First Year of Infection) ...	224	41	374
Acute Gonorrhoea	1,393	134	1,583
Total Acute Venereal Disease	1,617	175	1,957
Late and Congenital Syphilis	140	70	608
Chronic Gonorrhoea	101	22	413
Total Chronic Venereal Disease	241	92	1,021
Other Diseases, including Soft Sore, Septic Balanitis, etc.	795	102	1,234
Non-Venereal	741	60	977

The Corporation Centres are shown as treating 91.6 per cent. of all acute venereal infections compared to 90.6 per cent. in 1937.

Syphilis.—The rise in the incidence of acute syphilis during the past two years was not continued in 1938, there being 374 new cases at the Corporation Centres and Hospitals, as compared with 439 cases in 1937 and 385 cases in 1936. The number of new cases attending the *ad hoc* centres is shown in the following table:—

	Males.	Females.	Total.
1930	406	46	452
1931	296	41	337
1932	268	39	307
1933	258	39	297
1934	233	36	269
1935	201	35	236
1936	248	42	290
1937	264	48	312
1938	224	41	265

With regard to congenital syphilis the total number of new cases for the year amounted to 141, a further decrease from 177 in 1937 and 218 in 1936. There was an increase in cases under one year, as will be seen from the following table:—

1922	...	...	335	1931	...	...	73
1923	...	...	269	1932	...	...	72
1924	...	...	202	1933	...	...	67
1925	...	...	211	1934	...	...	65
1926	...	...	174	1935	...	...	53
1927	...	...	119	1936	...	...	60
1928	...	...	113	1937	...	...	36
1929	...	...	154	1938	...	...	53
1930	...	...	128				

Gonorrhœa.—The slight increase in the new cases of gonorrhœa has also been noted, but the figure is still much lower than 1,722, the figure for 1936.

Marked progress has been made during the year in the treatment of this form of venereal disease. In the laboratories of a British firm, Messrs. May & Baker, there was discovered a new drug which was found to have a much greater effect on the disease than any other known substance. This drug was called "M. & B. 693" and is a combination of Sulphanilamide and Pyridine. It not only acts in cases of gonorrhœa of the genito-urinary region but also produces rapid healing of ophthalmia neonatorum, *i.e.*, gonorrhœa of the eyes in the newly born infant. During the year observations were made on the value of this drug by Dr. M'Gregor Robertson at the Black Street Clinic, Drs. Ferguson Smith and Harvey at the Broomielaw Clinic, and Drs. M'Lachlan and Sommerville at the Bellahouston Clinic. Almost 300 cases were treated with astonishing results. The drug was given in tablet form, some 19 or 20 gms. being taken by mouth within seven days. One-third of the patients also had anterior urethral irrigation with 1:10,000 potassium permanganate solution, once daily for three weeks. It was found that in over 90 per cent. of the cases the disease was cured, and in only 6 cases, that is, 2 per cent., did any complications occur. A few patients failed completely to respond to the drug, but in general the organisms disappeared from the discharge in the course of 48 hours and the discharge dried up within five days. Some form of reaction occurred in about one-third of the cases, but this was rarely severe, being merely headache, nausea or giddiness. In a few instances the reaction took the form of a morbilliform or scarlatiniform rash which faded in the course of a few days.

There appears to be no doubt that "M. & B. 693" is definitely a specific means of treating this form of the disease. Not only is it of value in the male, but the results of treatment in the female surpass all other methods. There is one drawback and that is the danger of inadequate treatment, whether by self treatment or treatment without adequate supervision. In spite of this there seems no reason why there should not be some impression made on the incidence of this form of the disease now that an active drug has been found, provided care is taken in the skilled supervision of the patients during and subsequent to treatment.

In-Patient Treatment.—Table B shows admissions of patients to the hospitals of the Local Authority and elsewhere for the treatment of venereal diseases:—

TABLE B.

SHOWING TOTAL NUMBER OF PATIENTS ADMITTED FOR IN-PATIENT TREATMENT.

	Sex.	Primary Syphilis D.G. + W.R. —	Primary Syphilis W.R. +	Secondary Syphilis.	Latent Syphilis. (1st year).	All Later Stages.	Congenital Syphilis.	Extra-genital Infection.	Acute Gonorrhoea.	Chronic Gonorrhoea.	Soft Chancre.	Non-Specific Venereal Infection.	Other than Venereal.	Total Admissions.	Aggregate Days' Residence.	Average Days' Residence.
Belvidere Hospital...	M.	5	17	11	1	8	—	1	71	5	15	11	3	148	4,228	28.6
Third Street	...	M.	—	—	—	—	4	—	—	—	—	—	—	4	173	43.8
	F.	—	2	2	—	1	3	—	25	2	—	3	2	40	2,098	52.5
Rock Hospital	...	M.	—	—	—	—	13	—	—	—	—	—	8	21	2,843	135.4
	F.	—	11	19	—	15	16	—	3	126	—	—	9	199	12,665	63.6
Other Hospitals	...	M.	—	—	—	15	12	—	—	—	—	1	1	29	976	33.7
	F.	—	—	—	—	14	13	—	—	—	—	2	—	29	1,328	45.8
Totals	...	5	30	32	1	53	61	1	99	133	15	17	23	470	24,311	51.7

As already mentioned, the decrease in the admissions to hospital will be noted.

Age Incidence.—Table C shows the age incidence of cases suffering from the various infections.

TABLE C.

AGE INCIDENCE OF NEW CASES, 1938.

	—1	—5	—15	—20	—25	—35	+35	Total
Phylis { Primary, D.G. + W.R. —	—	—	—	3	12	34	23	72
Primary, W.R. +	...	—	—	4	32	63	39	138
Secondary	...	—	—	—	12	63	51	143
Latent (1st Year)	...	—	—	—	1	5	4	10
All Later Stages	...	—	—	—	8	36	111	312
Congenital	...	53	7	19	18	15	23	6
Extra-Genital	...	—	—	—	1	2	2	6
Gonorrhoea { Acute	...	4	7	12	67	333	747	413
Chronic	...	—	—	4	71	88	141	109
Soft Chancre	...	—	—	—	6	15	40	41
Non-Specific Venereal Infection	...	—	2	3	63	271	497	296
Other than Venereal	...	66	26	35	49	158	349	294
Totals	...	123	42	73	302	980	2,075	1,594

Attendance of Patients and Defaulting from Treatment.—The success of the follow-up of the Nurse Almoner in persuading patients to resume treatment suggested that an intensive visitation by the attendants of male cases might be productive of better attendance figures. With the reduction of irrigation, consequent on the use of "M. & B. 693," time is now available to permit of this additional work, and during the coming year it is hoped to persuade all cases of acute syphilis to attend until they have completed the course of treatment, if not for the full period of observation.

The following table shows the amount of arsenical treatment given to cases of early syphilis who have been dismissed as cured or who have defaulted during the year.

Less than One Course of "914" ...	...	...	...	81
One Course ...	...	...	...	93
Two Courses ...	...	...	...	54
Three Courses ...	...	...	...	14
Four or More Courses ...	...	...	...	12
Total ...	...	...	...	<u>254</u>

The standard course consists of 5.85 grams of neoarsphenamine, together with 2.0 grams of bismuth metal.

Table D shows the number of defaulters and dismissals during 1938.

TABLE D.
SHOWING NUMBER OF DEFAULTERS AND DISMISSALS DURING 1938.

	Syphilis.		Gonorrhoea.		Soft Chancre.		Non-Specific Venereal Infections.		Conditions other than Venereal.		Total.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.
Number of cases which at the commencement of the year, were under treatment or observation for ...	1,441	1,117	478	397	40	2	110	146	24	16	2,093	1,8
Transfers from other Centres ...	177	111	166	96	18	—	23	1	14	1	398	9
Defaulters returning	87	67	24	12	2	—	6	9	—	—	119	8
Cases in which treatment or observation was commenced during the year ...	522	460	1,527	469	100	2	710	422	824	153	3,683	16
Totals ...	2,227	1,755	2,195	974	160	4	849	578	862	170	6,293	34

	Syphilis.		Gonorrhoea.		Soft Chancre.		Non-Specific Venereal Infections.		Conditions other than Venereal.		Total.	
	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.	Males.	Females.

Number of cases which ceased to attend the Centre :—												
(a) before completing a course of treat- ment	343	249	368	61	29	—	204	140	—	—	944	450
(b) after completing a course of treat- ment but before final tests as to cure	208	118	376	29	18	1	107	54	—	—	709	202
Number of cases trans- ferred to other Treat- ment Centres or to care of private prac- titioners after treat- ment	236	286	246	242	35	1	55	3	—	—	572	532
Number of cases dis- charged from the Centre after comple- tion of treatment and observation	55	18	781	248	57	2	378	221	—	—	1,271	489
Number of cases in which death occurred from whatever cause, during treatment	9	8	1	1	—	—	—	1	—	1	10	11
Number of cases which at the end of the year, were under treatment observation	1,376	1,076	423	393	21	—	105	159	11	16	1,936	1,644
Totals	2,227	1,755	2,195	974	160	4	849	578	11	17	5,442	3,328

Incidence of Jaundice during Treatment.—Observations were continued during the year on the incidence of jaundice in new cases under treatment at Black Street Centre. It was found that the number of cases suffering from jaundice had markedly decreased, only 9.8 per cent. developing this complication out of 122 acute cases and no instance out of the 40 late cases. This compares very favourably with 21.6 per cent. found in acute cases and 5.7 per cent. in late cases in 1937.

Issue of Salvarsan Substitutes to Medical Practitioners.—Thirty-four practitioners received free supplies of salvarsan substitutes for the treatment of private patients. The total number of doses issued was 1,119 compared with 1,466 in 1937.

Report of the Nurse Almoner.—The nurse almoner paid 433 domiciliary visits during the year to 210 patients.* In addition, 36 visits were paid in connection with sociological matters arising out of the Venereal Diseases Scheme. As the result of these visits, 143 patients resumed attendance at the clinic.

SECTION VII.

PORT LOCAL AUTHORITY.

The constitution of the Port Local Authority is laid down in the Order of the Local Government Board for Scotland, constituting the Local Authority of the Burgh of Glasgow, in terms of the Public Health (Scotland) Act, 1897, the Port Local Authority of the Port of Glasgow. Article III is as follows:—

“The jurisdiction of the said Port Local Authority shall, subject to the exceptions hereinafter in this article mentioned, extend to the whole of the said Port of Glasgow as defined by the Treasury Warrant, dated 19th April, 1859, and to the place or places for the time being appointed as the Customs Boarding Station or Stations for the said Port; and the place for the time being appointed for the mooring or anchoring of ships for the said Port, under any Regulation for the prevention of the spread of diseases, issued under Part IV of the Public Health (Scotland) Act, 1897, and to all waters, harbours, and strands belonging to the said Port, etc.”

The duties of a Port Local Authority are laid down in the Public Health (Scotland) Act, 1897, and in the Port Sanitary Regulations (Scotland), 1933, made by the Department of Health for Scotland.

The Port staff now consists of a Senior Inspector, five Inspectors for food inspection, infectious diseases and nuisances, four Inspectors at Greenock Boarding Station, and five Rat Catchers, Searchers and Fumigators. As regards boarding of ships by a Medical Officer, the Public Health Staff act in rotation.

Boarding Station, Greenock.—All vessels are boarded in conjunction with H.M. Customs from a motor launch which is hired on a yearly contract. The co-operation existing between H.M. Customs and the officers of this Department in the administration of the Port Sanitary Regulations has been most cordial.

Summary of Work during the Year 1938.—There were 1,665 arrivals from foreign ports and 569 from the Irish Free State, a total of 2,234 ships. Of the vessels from foreign ports, 567 came from or called at infected ports, 265 direct, and 302 via a home

port, the remaining 1,098 being from non-infected ports. The tonnage of the 1,665 ships from foreign ports was 5,134,540 tons, as compared with 5,034,602 tons for the 1,624 ships during the year 1937.

Trade of the Port.—The trade of the Port in common with other British ports is world-wide. There is also a regular passenger traffic from the Port to Canada, the United States of America, &c.

The following table gives the countries outwith the British Isles with which the Port has its principal trade, and shows the nature of the imports and exports:—

Ports.			Imports.	Exports.
U.S.A.	...	...	Corn, grain and other farinaceous substances, provisions, fruit, timber, sewing-machines, tobacco, and all kinds of machinery, &c.	Manufactured cottons, leather, oilcloth, herrings, machinery, sanitary ware, spirits, and other sundries.
Canadian	...	...	Corn, grain and other farinaceous substances, provisions, fruit, timber, &c.	Textiles, machinery, chemicals, spirits, herring, oilcloth, &c.
Indian	...	...	Rice, beans, peas, tea, timber, cocoanuts, hemp, oils, linseed, myrabolams, manganese ore, &c.	Textile goods, machinery, spirits, paints, provisions and manufactured goods.
French	...	...	Brandies, wines, canned and dried fruits, vegetables and oils.	Machinery, chemicals, oils, coal and coal products, and other sundries.
German	...	...	Chemicals, hardware, provisions, and manufactured goods (jewellery, toys, leather, &c.)	Cottons, fish, leather, grease, coal and machinery.
Australian and New Zealand.			Grain, provisions (frozen meat, butter, &c.), skins, apples, eggs, flour, canned and dried fruits, &c.	Textile goods, machinery, paints, chemicals, spirits, hardware and sundries.
Spanish	...	...	Ores, fruits, sulphur, vegetables and wines.	Coal, machinery, chemicals and other sundries.
Norwegian	...		Paper pulp, timber and canned fish.	Coal, sewing-machine parts, cottons and manufactured goods.
South American	...		Grain, frozen and canned meats, nitrates, hides and fats.	Machinery, cottons, iron piping, chemicals, paints, fireclay, bricks, spirits and manufactured goods.
Swedish	...	...	Paper pulp, wood, matches, &c.	Coal, machinery, and textiles.
Belgian	...	...	Iron bars, cement, manufactured articles (baskets, brushes, pails, &c.), lard, canned vegetables and glass.	Machinery, cottons, oils and other goods.

Ports.	Imports	Exports.
African, North ...	Iron ore, esparto grass and fibre.	Textiles, machinery, iron tubes and piping.
African, South ...	Grain and fruits (fresh and canned), wool, tobacco, &c.	Chemicals, paints, spirits, coal and other sundries.
Grecian	Dried fruits and ore ...	Coal, machinery, cottons, paints and manufactured goods.
Japanese and Chinese.	Peas, oils and manufactured goods, eggs (liquid and frozen), ginger.	Machinery, cotton goods, chemicals, oils, &c.

The following table shows the number and nationality of the overseas vessels which arrived at Glasgow during 1938 as compared with the number for 1937.

Nationality.				Number of Vessels.		Number of Crew.	
				1937.	1938.	1937.	1938.
American	...	...	...	54	72	1,952	2,765
British	...	...	...	1,225	1,258	79,465	82,968
Belgian	...	...	...	1	—	49	—
Danish	...	...	...	36	36	747	817
Dutch	...	...	...	50	33	859	592
Esthonian	...	...	...	9	4	173	70
Finnish	...	...	...	26	25	616	555
French	...	...	...	3	6	122	159
German	...	...	...	21	39	437	676
Greek	...	...	...	14	12	403	376
Icelandic	...	...	...	6	7	172	211
Italian	...	...	...	3	5	78	140
Japanese	...	...	...	9	—	606	—
Jugo-Slav	...	...	...	3	1	93	30
Latvian	...	...	...	1	1	17	22
Norwegian	...	...	...	115	117	2,865	3,002
Panamanian	...	...	...	5	6	186	188
Roumanian	...	...	...	—	1	—	34
Russian	...	...	...	8	11	292	385
Spanish	...	...	...	8	—	269	—
Swedish	...	...	...	27	31	546	602
				1,624	1,665	89,947	93,592

The above table does not include vessels arriving from the Irish Free State ports. The number of ships which arrived from Free State ports, viz., Dublin, Limerick, Wicklow, Sligo, Waterford, Buncrana, Dundalk, Cork, etc., from 1st January to 31st December, 1938, was 567, all of which were boarded by officers of the Port Local Authority, either at Greenock or Glasgow. These vessels are dealt with in the same manner as ships from overseas ports with regard to health and cargoes.

NUMBER OF SHIPS ARRIVING FROM FOREIGN PORTS AND IRISH FREE STATE PORTS DURING THE YEAR 1938.

Month.	FROM INFECTED PORTS.						FROM NON-INFECTED PORTS (direct and coastwise).						Total from Foreign Ports.			From Irish Free State Ships.
	Class A (direct).			Class B (coastwise).			Total of A and B			From Non-infected Ports			Total from Foreign Ports.			
	Ships.	Crews.	Pass.	Ships.	Crews.	Pass.	Ships.	Crews.	Pass.	Ships.	Crews.	Pass.	Ships.	Crews.	Pass.	
January	27	1,228	7	25	1,916	114	52	3,144	121	102	3,695	1	154	6,839	122	44
February	15	704	1	21	1,805	—	36	2,509	1	76	3,536	633	112	6,045	634	36
March	24	1,087	29	30	1,771	—	54	2,858	29	93	3,887	257	147	6,745	286	42
April	25	1,495	219	32	2,740	122	57	4,235	341	89	3,806	272	146	8,041	613	43
May	27	1,993	507	28	2,603	607	55	4,596	1,114	93	4,070	362	148	8,666	1,476	48
June	26	1,926	650	23	2,424	830	49	4,350	1,480	89	3,423	740	138	7,773	2,220	48
July	24	2,298	2,079	27	2,752	945	51	5,050	3,024	90	3,784	2,112	141	8,834	5,136	56
August	20	1,761	500	18	1,514	196	38	3,275	696	101	5,880	2,439	139	9,155	3,135	56
September	21	2,236	497	21	2,371	448	42	4,607	945	73	3,274	419	115	7,881	1,364	48
October	18	1,428	224	28	3,121	141	46	4,549	365	101	4,289	238	147	8,838	603	54
November	15	899	1	24	2,612	172	39	3,511	173	103	4,047	158	142	7,558	331	53
December	23	1,177	7	25	2,111	172	48	3,288	179	88	3,929	297	136	7,217	476	41
Totals	265	18,232	4,721	302	27,740	3,747	567	45,972	8,468	1,098	47,620	7,928	1,665	93,592	16,396	569
1937	218	15,034	4,441	354	33,138	5,802	572	48,172	10,243	1,052	41,775	5,779	1,624	89,947	16,022	572

It will be observed that the number of ships arriving direct from infected ports has increased, 265 as against 218 in the previous year.

There was a marked decrease, from 354 to 302 ships, in this category, coming coastwise. With regard to the nationality of ships, British numbered 1,258 in 1938, as against 1,225 in the preceding year.

There were fewer Dutch, Esthonian and Greek ships, but more from Norway, Germany, Italy and Russia, as well as from Australia and New Zealand. There were no arrivals from Spain or Japan.

Infectious Diseases.—The total number of cases of infectious diseases and other illnesses which occurred on board vessels arriving at Glasgow was 176, compared with 287 during the preceding year. The cases dealt with at other ports numbered 78, so that the remaining 98 were found on arrival. There was no case coming within the group included in the Cholera, Yellow Fever, etc., Order. Apart from 17 cases of illness of a non-infectious nature, the largest group of cases dealt with was 13 of pneumonia, 4 of which were removed to hospital, and 12 cases of measles, of which 6 were removed to hospital and 6 allowed to go home. There were also 6 cases of enteric fever, 3 being removed to hospital and 3 sent home.

	Total No. of Cases.	Cases dealt with in other Ports.	Cases found on Arrival.	Cases sent to Hospital in Glasgow.	Cases sent Home.	Deaths.
Enteric Fever ...	6	3	3	3	—	1
Smallpox ...	—	—	—	—	—	—
Diphtheria ...	—	—	—	—	—	—
Scarlet Fever ...	3	2	1	1	—	—
Measles ...	21	9	12	6	6	—
Whooping Cough ...	6	4	2	—	2	—
Chickenpox ...	3	1	2	1	1	—
Cerebrospinal Fever ...	2	1	1	1	1	—
Phthisis ...	9	5	4	1	3	—
Venereal ...	37	14	23	4	19	—
Malaria ...	13	3	10	1	9	1
Mumps ...	2	1	1	—	1	—
Pneumonia ...	13	4	9	4	5	3
Dysentery ...	7	2	5	3	2	—
Influenza ...	8	2	6	2	4	—
Tonsillitis ...	2	1	1	—	1	—
Erysipelas ...	1	—	1	—	1	—
Trachoma ...	—	—	—	—	—	—
Other Illness ...	43	26	17	10	7	9
Accidents ...	—	—	—	—	—	—
	176	78	98	37	61	14

Smallpox.—On 22nd February, 1938, the Ministry of Health reported that a vessel from Bombay, via Aden, Port Said, and Liverpool, which was due to arrive at the Port of Glasgow on 8th March, had landed a case of smallpox, a native member of the crew, at Aden on 17th February. On arrival the vessel was boarded by Doctors and Inspectors of the Port Local Authority staff. The crew, which numbered 233 (both European and Lascars) were medically examined, and arrangements made for surveillance of those members of the European crew who had been paid off.

Dysentery.—A vessel arrived on 20th April on which several cases of dysentery or suspected dysentery had occurred. The medical history of the ship was as follows:—

(1) A female passenger reported sick on 1st April, was landed at Liverpool and allowed home. (2) A female passenger reported sick on 6th April, was landed at Marseilles and proceeded home overland. (3) A member of the crew, a waiter, reported sick on 10th April; dysentery was suspected; he was landed at Liverpool on 18th and removed to hospital for observation. (4) Another waiter reported sick on 15th April, was diagnosed appendicitis and taken to hospital at Liverpool, on 18th April.

Disinfection of hospitals and all infected linen was carried out and the ship visited periodically during her stay in port.

Enteritis.—A vessel arrived at the Tail of the Bank from Soussa, North Africa, on 24th October. The Master of the vessel declared the health of all on board to be satisfactory but made no mention of any illness amongst the members of the crew during the voyage when signing the Declaration of Health. It was later revealed that 12 members of the crew had suffered from severe diarrhoea when the vessel was at Soussa and for several days thereafter.

The Master of the vessel was ordered to empty and cleanse the domestic tanks and refill them with fresh water. The latrine accommodation was disinfected prior to this sailing. The ship was visited on the day of sailing and it was reported that the crew were fit and in good health.

Venereal Disease.—All Masters or Chief Officers of vessels entering the Port are diplomatically approached as to the existence of venereal disease amongst the personnel of the ship. Ratings suffering from this disease are advised to attend the most suitable

Corporation clinic for proper treatment, and a leaflet showing addresses of the clinics and hours of attendance is given to the person concerned. When the course of treatment is incomplete he is advised at the clinic to attend for further treatment at his next port of call.

During the year 265 merchant servicemen attended the clinic for venereal diseases at Broomielaw. The disease and numbers are as shown:—Gonorrhœa, 105; Syphilis, 57; Gonorrhœa and Syphilis, 8; Chancroid, 23; Non-specific, 37; Non-venereal, 35; Total, 265.

MEDICAL INSPECTION OF ALIENS.

The Aliens Order, which came into force on 1st September, 1919, governs the landing of aliens in the United Kingdom at approved ports and the inspection of said aliens by the Immigration Officer and Medical Inspector. The examination of aliens by the Medical Inspector and Immigration Officer is made concurrently as far as practicable, and these examinations as a rule are made on board ship. When an alien has to undergo special medical examination this can be done on shore, at a hospital or at the Public Health Office.

During the year 102 ships with alien passengers arrived at Glasgow. The number of aliens was 3,810 non-transmigrants, and 29 transmigrants. Of these, 573 were medically examined, 524 on 42 ships from U.S.A., and 49 on 9 ships from Canada. Two medical certificates were issued for the following reasons:—pulmonary tuberculosis and venereal disease.

RETURN OF ALIEN PASSENGERS ARRIVING IN GLASGOW DURING 1938.

			Non- Transmigrants.	Transmigrants.	Total.
American	...	...	3,706	11	3,717
European	...	...	99	18	117
Asiatic	...	...	5	—	5
			3,810	29	3,839

Emigrants.—During the year 140 ships carrying emigrants left the Clyde. Of these, 56 sailed for America, a decrease of 2, and 84 sailed for Canada, the same number as the preceding year. Passenger ships sailing from the Clyde for Australia and New Zealand embark passengers at Liverpool.

The following is a return of emigrants and ships which left Glasgow during 1938:—

Country.		Ships.	British Subjects.	Other Nationalities.	Total.
America	... ..	56	4,406	4,921	9,327
Canada	... ..	84	7,755	775	8,530
Total	... ..	140	12,161	5,696	17,857
Total, 1937		142	12,009	5,786	17,795

PARROTS (PROHIBITION OF IMPORT) REGULATIONS (SCOTLAND), 1930.

During the year 11 ships arrived with 22 birds—all lovebirds—which were dealt with under the Regulations. One lovebird died and was destroyed in the ship's furnace. The other 21 lovebirds were re-exported.

RAT DESTRUCTION.

The Port Sanitary Regulations (Scotland), 1933, which provide for the compulsory deratisation of ships by an approved fumigant and the issuing of Deratisation or Deratisation Exemption Certificates as the occasion demands in accordance with the Sanitary Convention of Paris, 1926, has proved an effective weapon in preventing the importation of rodent plague into this country.

Ships arriving from infected or suspected ports are subjected to a systematic search on docking. The rat officers employed by the Authority are specially trained in rat detection and their primary duty is the visiting of these ships. They form an estimate of the rat prevalence from a search of the ship's holds, store-rooms, crew's quarters, life boats, etc., for excreta, nesting, runs, and note damage to cargo or structures. Where evidence of recent rat infestation is found traps are set for confirmation. Specimens caught are submitted to the City Bacteriologist for report. The Master of the vessel or Officer-in-Charge is also ordered to take such preventive measures as may be prescribed in order to prevent the passage of ship rats to the shore, or *vice versa*. Sheds and premises adjacent to the docks are systematically trapped and specimens submitted for Bacteriologist's report.

Deratisation and Deratisation Exemption Certificates.—During the year 124 Deratisation Certificates and 390 Deratisation Exemption Certificates were issued. When evidence is produced that a ship's

certificate is no longer valid and that the ship requires fumigation, the Captain of the vessel or the local shipping agent is advised to make arrangements to deratise the vessel forthwith to the satisfaction of the Medical Officer of Health who shall specify the technique to be employed.

An endeavour is always made to meet the urgent request of shipping agents and to facilitate in every way the movements of vessels by carrying out the deratisation of their ships after hours, overnight or during the week-ends. Some shipping companies anticipate the renewal of their ships' valid certificates and give the Authority warning of the vessels' arrival. Very often, however, the vessel arrives empty and is due to load on arrival or depart for a cargo elsewhere after bunkering. Records are kept of the issue of certificates and of the conditions as to rat infestation of the various vessels trading to the port and it is, therefore, usually possible to comply with these late applications.

Deratisation is also facilitated by the more frequent use of Hydrogen Cyanide Gas for fumigation purposes. The exposure required when using this gas is only one-third of the time required when sulphur is used. As this gas is the most dangerous gas in use, it is essential that contractors should have a thorough technical knowledge of its dangers and the precautionary measures to be adopted before, during and after its application. These fumigations are undertaken by outside contractors, thereby relieving the Port Health Authority of any responsibility for accidents. Sulphur fumigations, however, still continue to be done by this Department on request. During 1938 sulphur fumigations were carried out on 37 vessels and HCN used in 83, compared with 33 and 99 respectively during the preceding year.

For the purpose of providing a Deratisation or a Deratisation Exemption Certificate 514 ships were inspected. The following table shows the number and classification of the certificates granted:—

	Deratisation.				Total.
	SO ₂	HCN.	Trapping.	Exemption.	
From Infected Ports	32	77	3	272	385
From Non-Infected Ports	5	6	—	118	129
	37	83	3	390	514

Of the 390 Deratisation Exemption Certificates, 27 were issued to new vessels sailing on their maiden voyage.

During the year 1,272 rats were caught in sheds, stores and other premises. The different sex and species are shown in the following table:—

Brown Rat.		Black Rat.						Total.	To Labora- tory.	Result,
R. Norvegicus		R. Rattus.		R. Alexandrinus.		R. Frugivorus.				
Male.	Female.	Male.	Female.	Male.	Female.	Male.	Female.			
447	374	108	89	132	93	18	11	1,272	447	Negative

Deratisation.—One hundred and twenty-four ships were deratised during the year—37 by SO_2 , 83 by HCN, 3 by trapping, and 1 by Salforkose. The following table shows the number of rats, their species and sex recovered.

Infected Ports.						Non-Infected Ports.						Total	To Labora- tory	Result
R.A.		R.R.		R.F.		R.A.		R.R.		R.F.				
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.			
CN—														
181	114	262	160	104	53	10	6	8	5	7	3	913	11	Neg.
O ₂ —														
246	151	289	191	51	21	35	22	50	25	18	11	1,110	8	Neg.
TRAPPING—														
3	2	4	2	—	—	—	—	—	—	—	—	11	3	Neg.
SALFORKOSE—														
—	—	5	2	2	1	—	—	—	—	—	—	10	1	Neg.
430	267	560	355	157	75	45	28	58	30	25	14	2,044	23	Neg.

R.A. = Rattus Alexandrinus.

R.R. = Rattus Rattus.

R.F. = Rattus Frugivorus.

The following table shows the number of Deratisation and Deratisation Exemption Certificates issued from 1927 to 1938, the number of rats caught or destroyed on board ship, and in sheds and other premises adjacent to the dock.

Year	Total Certificates Issued.	Number of Deratisation and Exemption Certificates issued showing Percentage.				Number of Rats Caught.		
		Derati- sation.	Per- centage.	Exemption.	Per- centage.	On Ships.	On Shore.	Total.
1927	106	100	94.3	6	5.7	1,343	111	1,454
1928	133	110	82.7	23	17.3	1,520	10	1,530
1929	225	135	59.1	90	40.9	3,371	175	3,546
1930	434	191	44.0	243	56.0	3,096	579	3,675
1931	432	156	36.1	276	63.9	2,438	351	2,789
1932	427	151	35.4	276	64.6	2,115	449	2,565
1933	438	125	28.5	313	71.5	2,491	328	2,819
1934	478	134	28.0	344	72.0	3,081	745	3,826
1935	488	113	23.2	375	76.8	3,582	712	4,294
1936	547	135	24.7	412	75.3	4,115	1,156	5,271
1937	515	133	25.8	382	74.2	3,045	1,032	4,077
1938	514	124	24.1	390	75.9	2,520	1,272	3,792
Total	4,737	1,607	—	3,130	—	32,717	6,920	39,637

No. of Deratisation Certificates issued in 1927 ... 94.3 per cent.

No. of Deratisation Certificates issued in 1938 ... 24.1 "

No. of Deratisation Exemption Certificates issued in 1927 ... 5.7 "

No. of Deratisation Exemption Certificates issued in 1938 ... 75.9 "

NUISANCES ON SHIPBOARD.

Inspections and re-inspections to the number of 2,531 of vessels in harbour were made during the year. The visits to oversea steamers numbered 1,664, and the re-visits 514. In oversea sailing vessels, 1 inspection was made and 1 re-visit, while 312 coasting steamers and 3 sailing craft were examined, re-visits being paid to 34 of the former and 2 of the latter. Four hundred and sixty-five verbal warnings were given to Masters where nuisances of a minor nature were found, and 83 intimations and 5 notices (under the Public Health Act) were served where defects existed. Two hundred and forty-five verbal instructions were given and 185 notices served on Masters of vessels *re* locking-up of water-closet accommodation while vessels were in port.

The nuisances discovered numbered 2,130—in forecastles, rooms, etc., 755; and water-closets, wash-houses, etc., 428; while structural defects were found in 406 instances—293 within crews' quarters and 113 in water-closet and lavatory compartments. General complaints were recorded in 541 instances.

Sanitary Defects and Nuisances.—The following table shows the nuisances found on board vessels arriving in the harbour:—

ARISING FROM STRUCTURAL DEFECTS.

<i>Forecastles, Rooms, &c.</i> —	1935.	1936.	1937.	1938
Overhead decks leaking	78	104	77	60
Ports defective	165	156	160	71
Skylights out of repair	8	34	30	10
Without scupper-pipe or same cemented ...	4	10	7	2
Ventilators plugged, out of repair, or unshipped	7	19	5	3
Without bogies or funnels, or such out of repair	17	20	18	10
Inadequately lighted or ventilated	16	43	51	30
Radiators or steam-pipes defective	37	55	30	29
Doors to forepeak and forecastle broken ...	4	4	5	2
Ship's sides leaking	3	6	4	1
Anchor chain exposed by sheathing being out of repair	2	12	9	7
Doors of food lockers and seats out of repair	114	117	77	23
Requiring wood sheathing or cork-spraying for "sweat"	11	40	21	16
Hawse pipes defective	4	6	7	2
Floors broken and out of repair	40	56	50	15
Bulkhead between forecastle and W.C. compartment broken	3	2	17	8
Scuppers required	3	4	3	2
Waste pipe leaking	7	10	4	2
	523	698	575	293

<i>Water-closets, Urinals, Washhouses, &c.—</i>	1935.	1936.	1937.	1938
Flushing apparatus, basins or discharge pipes defective	65	106	53	37
New water-closet required	25	28	20	10
Ports defective	6	12	18	7
Floor and woodwork out of repair	4	6	13	6
Doors broken and new locks required (w.c.'s must be locked while ship is in harbour)	46	50	51	28
Ventilators plugged	5	8	9	5
Woodwork of w.c. basin broken	45	59	21	15
Compartments defective in light and ventilation	13	22	25	5
	209	291	210	113

ARISING FROM MISUSE.

<i>Forecastles, Rooms, &c.—</i>	1935.	1936.	1937.	1938.
Alleyways and companionways dirty ...	146	149	89	63
Floors, mat coverings, ceilings, woodwork, &c., dirty	214	197	205	254
Interior of ships' sides or woodwork dirty (to be limewashed or repainted)	222	196	215	210
Galleys dirty	39	58	20	12
Tables and benches dirty	196	187	188	168
Scuppers choked (water lying stagnant) ...	45	61	11	34
Bunks dirty	52	46	25	14
	914	894	753	755

Water-closets, Washhouses, &c.—

Floors, ceilings, and woodwork dirty ...	148	130	200	108
Basins, hoppers, or troughs fouled, corroded, or choked	158	178	235	149
Scuppers choked	60	55	54	42
Wash-house dirty	14	31	51	43
Interior requiring limewashing or repainting	118	108	249	73
Waste-pipe defective	10	34	14	13
	508	536	803	428

GENERAL NUISANCES.

	1935.	1936.	1937.	1938.
Food lockers dirty	162	155	160	181
Bilges (hold) dirty	86	115	54	32
Gear and foodstuffs stored in sleeping compartments	40	53	26	31
Drinking-water tanks dirty and in need of re-cementing	109	132	82	34
Drinking-water tanks out of repair or uncovered	5	9	5	3
Accumulation of rubbish in fore-castle or on deck	155	83	28	25
Fore-castle infested with vermin	234	348	366	232
Bedding dirty or verminous	75	44	62	2
Bilges ventilating into fore-castle	1	2	—	1
	867	941	783	541

The following table shows the number of oversea and coastwise ships inspected in the harbour during the years 1936-38:—

		Inspections.			Re-inspections.		
		1936.	1937.	1938.	1936.	1937.	1938.
Oversea Steam	...	1,560	1,622	1,664	624	551	514
„ Sail	...	4	2	1	9	2	1
Coast Steam	...	322	321	312	45	35	34
„ Sail	...	9	9	3	7	4	2
Intimations	...	...	...	...	106	86	83
Warnings	...	...	...	...	600	589	245
Notices	...	...	...	...	7	8	5
Letters to other Port Authorities	...	...	...	...	72	75	69
<i>Nuisances—</i>							
Functional	...	...	...	...	1,430	1,556	1,183
Structural	...	...	...	...	989	785	406
General	...	...	...	...	941	783	541

Of the total arrivals 1,258 were British and 407 vessels sailed under foreign flags, the latter including 17 different nationalities.

Rags, Hair, Hides and Bones.—The following table shows the importation of rags, hair, hides and bones, with source of origin and number of shipments:—

Source of Origin.	No. of Ships.	Rags. Bdles.	No of Ships.	Hair (various). Bdles.	No. of Ships.	Hides (various). Bdles.	No. of Ships.	Bones. Bdgs.
Europe ...	49	659	21	752	47	19,524	—	—
Canada ...	—	—	8	730	1	25	—	—
United States ...	—	—	25	3,898	2	377	—	—
South America	—	—	19	1,861	11	20,594	15	13,197
Australia & N. Zealand	—	—	1	11	36	10,883	—	—
India ...	—	—	2	18	26	692	8	3,232
South Africa	—	—	—	—	6	202	3	235
Japan ...	6	330	1	11	—	—	—	—
Egypt ...	1	127	—	—	—	—	—	—

In addition to the foregoing a considerable quantity of rags is imported from Irish Free State ports.

Anthrax.—Owing to internal conditions in Spain the importation of oranges from that country has been negligible, and consequently goatskin bindings for orange boxes have been conspicuous by their absence. Samples of imported hides have been examined by the Bacteriologist for the presence of the anthrax bacillus with negative results.

Co-operation with other Port Health Authorities.—During the year the exchange of information relating to structural defects and nuisances found on board ships and not removed prior to sailing have been reported to the Port Medical Officer of Health at the next British port of call. An “intimation” in terms of the Public Health (Scotland) Act is generally served on Masters drawing their attention to defects or nuisances on their vessels. If the ship has part cargo or is proceeding to its terminal port where the crew is to be “paid off” and the Master advises the Department that the complaint referred to in the “intimation” will be remedied there, no further action is taken other than notifying the Medical Officer at the next port. This procedure reduces the inconvenience to all concerned to a minimum and gives the Master of the vessel time to remedy the nuisances complained of. This exchange of information is also carried out not only where there has been infectious disease on board but also in the case of ships found to be “ratty” and sailing for their home ports with part cargo for completion of discharge. The Board of Trade are also duly advised, either in writing or verbally, of the existence of structural defects in crew’s accommodation.

Bug Infestation on Ships.—During the year routine examinations of ships arriving at the Port revealed the fact that 232 ships showed varying degrees of bug infestation, as compared with 366 during the previous year. Fifty-six “intimations” in terms of the Public Health (Scotland) Act, 1897, were served on Masters or owners, and 176 verbal warnings were given.

This marked improvement in the bug infestation of ships is probably due to several factors. In new vessels, and in old ships when the crew accommodation is being reconditioned, plywood is now being extensively used for internal bulkheads and partitions in lieu of the ordinary tongued and grooved partitioning and lining.

Another contributing factor is the Board of Trade’s revised “Instruction as to the Survey of Master’s and Crew Spaces, 1937.” These instructions emphasise the fact that it is the duty of the Master to satisfy himself by frequent and regular inspection that the crew’s quarters are maintained in a proper condition, and that the said quarters are cleansed daily and every effort made to detect and eradicate vermin.

Pamphlets entitled "Prevention of Bug Infestation and Methods of Extermination" were not only served on Masters of ships but advice and assistance were also given by officers of this Department. Masters and mates on board vessels trading with the Port have now become conversant with the history and habits of the bed bug and the more effective methods for dealing with them. A practice now being adopted by some Masters as a result of advice given is to keep a supply of sulphur on board and to fumigate not only the crew's quarters but also their personal effects during the voyage when the climatic conditions are suitable for keeping the crew on deck during disinfestation.

PUBLIC HEALTH (PRESERVATIVES, Etc., IN FOOD) REGULATIONS (SCOTLAND), 1925.

The above Regulations apply to all imported articles of food-stuffs, except where they are intended for re-export or for use as ship's stores.

Cream.—Fairly large consignments arrive from the North of Ireland and Irish Free State ports. During the year 30 samples of cream were examined by the City Analyst for boron preservative, with negative results.

Arsenic in Apples.—Of 18 samples of various brands of apples, 11 were reported as containing no arsenic. The remaining 7 samples contained arsenic within the prescribed limit. Nine of the samples were taken from apples landed from North American ports, and nine were from Australasian and Canadian ports. Of the nine samples taken from these latter ports, the arsenic found was well within the limit. It was not considered necessary to condemn any of the fruit.

Boric Acid in Oranges.—Ten samples of oranges were taken during the year and submitted to the City Analyst, who reported the presence of boron preservatives in all samples in small quantities ranging from 0.009 to 0.016 of a grain per lb. The evidence suggests attempts to preserve the fruit by dipping in a boron solution, but in view of the fact that the quantity present is found naturally in citrous fruits it is difficult to say what amount may indicate treatment.

IMPORTED FOOD REGULATIONS, 1937.

The following table shows the character and quantity of the foodstuffs imported direct during 1938 (but does not include coast-wise or transhipped cargoes), a percentage of which was examined by the food inspectors before removal.

Article	Weight. Tons Cwts.	Article.	Weight. Tons Cwts.
Apples	34,804 13	Lemons	2,548 3
Apricots	318 5	Liquorice	11 1
Almonds	325 14	Meal (various) ...	16,262 19
Bananas	6 15	Meats (canned, &c.)	6,490 17
Bacon	468 8	Melons	941 12
Barley	42,205 1	Milk (canned) ...	22 —
Butter	8,766 17	Milk (dried) ...	463 16
Cereals (Oats, Rye, &c.)	118,845 7	Molasses	305 11
Cheese	6,449 16	Macaroni	426 3
Coffee	29 2	Nuts (various) ...	3,187 16
Cocoa	45 10	Oils (various) ...	11,159 2
Condiments	2,491 8	Onions	7,646 1
Confectionery ...	575 2	Oranges	45,460 8
Cream of Tartar ...	76 15	Orange and Lemon Peel	151 17
Eggs	59,744 19	Peaches (canned) ...	1,916 6
Eggs (liquid)	1,245 11	Pears	5,756 8
Eggs (albumen) ...	349 5	Pears (canned and dried)	3,592 4
Fish (canned, &c.) ...	1,116 3	Pineapples	2,698 17
Fruits (canned) ...	5,784 3	Plums (canned and dried)	1,748 2
Fruits (dried)	9,248 5	Pomegranates	39 17
Fruits (juices)	459 4	Potatoes	3,478 18
Fruits (pulp)	646 8	Peas	13,735 2
Flour (various)	95,590 15	Rice	5,300 7
Farinaceous Foods ...	5,169 10	Sundries	2,977 19
Glucose	2,520 16	Sugar	6,746 19
Grapes	3,541 4	Syrup	132 18
Grape-Fruit	2,927 2	Tomatoes	15 5
Ham	3,138 13	Tomatoes (canned) ...	1,441 17
Honey	922 —	Vegetables (canned)	903 1
Lard	769 16	Wheat	207,858 4
<i>Total weight</i>		<i>762,001 tons, 7 cwts.</i>	

The following foodstuffs were found unfit and disposed of to the satisfaction of the Medical Officer of Health.

Article.	Weight. Cwts. Qrs.	Article.	Weight. Cwts. Qrs.
Apples	1 1	Grape-Fruit	55 —
Butter	— 2	Meats (canned) ...	32 1
Corn Flakes	4 —	Nuts (walnuts) ...	4 2
Carrots	80 —	Oranges	28,631 —
Confectionery	1 —	Onions	52 —
Egg Yolk	772 —	Potatoes	2,273 —
Flour	785 —	Plums	45 —
Fruits (canned) ...	7 3	Pears	6 2
Fruits (dried)	2 2	Rice	6 —
Grapes	20 —	Soups (canned) ...	3 2
<i>Total weight</i>		<i>32,783 cwts., 3 qrs.</i>	

FOODSTUFFS SAMPLED.

During the year foodstuffs were sampled and submitted to the City Analyst, who reported as follows:—

Article.	Samples Reported.		Fit for Human Consumption.	Unfit for Human Consumption or not in conformity with Regulations.	Notes on Defective Samples.
Apples	18	—	
Apples in SO ₂	2	4	Contained an excess of SO ₂ . Released for manufacturing purposes.
Apricot Pulp	3	—	
Butter	10	—	
Cereals (Grapenuts, &c.)			6	2	Damp and mouldy—4 cwts. condemned.
Coffee and Coffee Substitute	4	—	
Confectionery	9	2	Damaged bilge and sea-water—1 cwt. condemned.
Cheese	4	—	
Condiments	2	—	
Cream	30	—	
Carrots	1	1	Decayed—80 cwts. condemned and released for cattle-feeding.
Citric Acid	2	—	
Cream of Tartar	7	—	
Desiccated Cocoanut	6	—	
Egg Yolk	5	3	Contained boron compound. 772 cwts. condemned and released for technical purposes.
Egg Albumen	4	—	
Fats (various)	12	—	
Fish (Canned, &c.)	23	—	
Flour (Various)	5	1	Damaged by sea-water. 550 cwts. condemned and released for technical purposes.
Fruits (Canned, &c.)	78	—	
Fruits (Dried)	47	1	Damp and mouldy—2½ cwts. condemned.
Fruit Pulp	16	1	Contained an excess of SO ₂ . Released for manufacturing purposes.
Glucose	2	—	
Grapes	3	—	
Grape-Fruit Juice	1	5	Contained an excess of SO ₂ . For cordial making.
Grape Juice	1	2	Contained an excess of SO ₂ . For manufacturing into British wines.
Ginger (Wet)	2	—	
Honey	7	—	
Jams and Jellies	4	—	
Lard	7	—	
Lemon Juice	2	—	
Macaroni	2	—	
Margarine	2	—	
Meats (Canned)	26	3	Imperfect sterilisation. 32 cwts. condemned.

Article.	Samples Reported.		Fit for Human Consumption.	Unfit for Human Consumption or not in conformity with Regulations.	Notes on Defective Samples.
Milks (Canned)	2	—		
Milks (Dried)	1	—		
Mineral Waters	2	—		
Molasses	3	—		
Nuts	—	1		Damp and mouldy. 4½ cwts. (walnuts) condemned.
Oils (Various)	13	—		
Onions	—	1		Damaged by bilge water. 52 cwts. condemned.
Oranges	10	—		
Orange Juice	2	9		Contained an excess of SO ₂ . For cordial making.
Potatoes	—	3		Diseased—2,273 cwts. condemned.
Peel in Brine	3	—		
Pork and Beans	1	—		
Plums	—	4		Diseased and frosted 45 cwts. condemned.
Salt	2	—		
Sauces	6	—		
Soups	5	—		
Sugar	4	—		
Syrup	3	—		
Strawberries (Preserved)		8	—		
Tartaric Acid	2	—		
Tea	8	—		
Tomatoes (Canned)	11	—		
Vegetables (Canned)	8	—		
Wines	2	—		
Water	7	—		

The foregoing tables show the great variety of the foodstuffs examined and dealt with during the year. The method of procedure is the same in each case. Suspected foodstuffs are detained for inspection, the consignee is communicated with, and a suitable time is arranged for the re-examination of the material. As a rule, the consignees, on being satisfied as to the unsoundness of the food, agree to the disposal of the condemned food, thereby obviating the necessity of obtaining a warrant from the Sheriff or Magistrate. Much time is often taken up in examining and supervising the reconditioning of consignments. The following are examples of this:—

Canned Jellied Veal.—A cursory examination of a parcel of 500 cases of canned jellied veal showed the consignment to be in a bad condition. Staining was extensive, and the stench arising from the burst tins compelled the stevedores to request the removal of the consignment from the quay as soon as possible.

Permission to do so was granted by the responsible officer, but the consignee's representative refused to accept the veal for storage. A meeting of all interested parties was arranged, and it was agreed that the entire parcel be opened and examined on the quay, all burst, blown and crushed tins to be removed, and the apparently sound tins submitted to a further examination.

Four samples were taken and submitted to the City Analyst, who reported as follows:—

"On the 10th instant I received two tins of *Jellied Veal*, and on the 11th instant one tin, all marked "H," from Auckland, New Zealand. All three tins were in a 'blown' condition. On the 12th instant, a fourth tin was received which appeared to be in a normal condition. The three blown tins were numbered by me 1, 2, and 3, whilst the fourth tin was numbered 4.

"Tin No. 1 showed the most evidence of being blown, and a sample of gas from this tin was collected for examination. On analysis, this was found to contain 88 per cent. of carbon dioxide. The contents of all three blown tins showed considerable liquefaction and possessed a very disagreeable odour. The interior surface of all four tins was clean and bright."

"From a consideration of these results it would appear that the spoilage in the blown tins was in all probability due to imperfect sterilisation of the contents during the processing of the meat. The contents of all three blown tins are unfit for human consumption, whilst the contents of tin No. 4 appeared to be in a sound condition. On examination, the metal containers appeared to be thinner than what normally occurs in tins of a similar nature, and when full the tins were easily dented,"

The reconditioning of the parcel was carried out, and it was found that of the 500 cases, 50 were either blown, burst or crushed. These were condemned and removed for destruction by the Cleansing Department. As the damage was assumed to be caused by imperfect sterilisation, the consignee was asked to convey and keep the meat in store for a reasonable time before placing it on the market—this request being readily acceded to by the owner. The 600 tins which were destroyed weighed approximately 32 cwts.

Onions.—A consignment of Egyptian onions showed signs of damage from sweat and bilge-water, and a number of bags were set aside for examination in conjunction with the consignees. It was agreed to recondition all bags showing signs of dampness and final examination showed 52 bags of the onions, weighing approximately 52 cwts., to be unfit for human consumption.

Flour.—Extensive damage was observed in a cargo of sago-flour which arrived from China, and the entire parcel consisting of 364 bags was detained. A meeting was arranged with the consignee, and samples taken to determine the cause of the damage. The

City Analyst reported that the flour was heavily contaminated with salt water and was unfit for human food. This result was communicated to the consignee, who thereupon intimated his intention to have the flour disposed of for technical purposes. This was agreed to on condition that the names, etc., of the purchasers be supplied to this Department. The Local Authorities of districts outwith the City boundaries were notified as to the despatch of the condemned material to their area. 550 cwts. of flour were thus disposed of.

Plums.—Several cases of plums from Montreal were found to be in an unsatisfactory condition, the cause of the damage being due apparently to a low temperature. In appearance, the plums were affected by a brown spot on the top, sides and bottom—in some cases the plums were “blaeish” in colour, and when cut showed damage to a considerable depth in the fruit. The parcel was re-conditioned, and a total of 195 cases, weighing some 40 cwts., were condemned and removed for destruction by the Cleansing Department.

Carrots.—A vessel arrived from Montreal with general cargo, part of which consisted of 500 bags of fresh carrots marked “Mile-End.” It was noted that a number of the bags of carrots were wet and the contents wasty. The consigner was advised as to the condition of the parcel and agreed to recondition the carrots on the quay. The carrots were emptied into a truck for the selection of the sound material, each bag being emptied separately. The good carrots were selected and rebagged in fresh, clean bags provided by the importer, the wasty material being replaced in the original bags, weighing 56 lbs. per bag. The consignment was under supervision from the time of arrival until the question of the disposal of the wasty carrots was settled. The reconditioning of the carrots showed that 164 bags were unfit for human consumption, and the owner was granted permission to dispose of them for pig-feeding, so that he would be saved the cost of cartage and destruction. The weight of carrots condemned was 82 cwts.

S. HENDRY,
Senior Port Inspector.

FOREIGN MEAT REGULATIONS.

The following statement, compiled from information supplied by the Corporation Veterinary Surgeon, indicates the work done under the Foreign Meat Regulations:—

EXAMINED.

BEEF (<i>Fresh Meat</i>)—				FISH—			
Quarters	...	...	22,888	Salmon (boxes)	...	...	576
Boxes	...	...	3,099	Halibut (boxes)	...	...	6
Bags	...	...	344,671	POULTRY—			
Cuts...	...	...	25,107	Ducks (barrels)	...	...	85
VEAL—				OFFAL—			
Bags	...	...	9,554	Ox-Tongue (bags)	...	...	917
Quarters	...	...	60	Ox-Tails (bags)	...	...	36
Sides	...	...	20	Ox-Cheeks (bags)	...	...	1,773
MUTTON AND LAMB—				Ox-Livers (boxes)	...	...	1,929
Carcases	...	...	136,972	Ox-Livers (bags)	...	...	485
PORK—				Ox-Hearts (bags)	...	...	203
Carcases	...	...	194,795	Ox-Tripe (boxes)	...	...	595
Sides	...	...	114,854	Ox-Tripe (bags)	...	...	315
Boxes	...	...	9,567	Ox-Kidneys (boxes)	...	...	446
Bags	...	...	18,360	Ox-Sweetbreads (boxes)	...	...	319
MESS PORK (Salted Meat)—				Sheep Livers (crates)	...	...	880
Barrels	...	...	25	Sheep Kidneys (cases)	...	...	93
BACON AND HAMS—				Sheep Casings (tierces)	...	...	188
Bales	...	...	3,015	Beef Casings (tierces)	...	...	164
Boxes	...	...	2,835	Pig Casings (tierces)	...	...	63
				Pig Livers (tierces)	...	...	20
				Calves Tongues (boxes)	...	...	95
				Calves Kidneys (boxes)	...	...	194
				Pigs Tongues (boxes)	...	...	20

CONDEMNED.

Beef (bags)	...	...	237	Pigs (carcases)	...	...	8
Beef (cuts)	...	...	6	Pork (sides)	...	...	67
Lamb (carcases)	...	...	16	Pork (cuts)	...	...	715
Lamb (cuts)	...	...	39				

SECTION VIII.

HOUSING.

By Dr. H. E. Seiler.

There was at Whitsunday, 1938, a total of 280,561 dwelling-houses in the City, of which 279,816 were occupied and 745 unoccupied. Comparative figures for the previous year were 277,726 occupied houses and 1,348 unoccupied. There has been a continued decrease in the number of unoccupied dwellings, particularly among those of the smaller size, during recent years, a fact which reflects the real shortage of housing accommodation in the City. Linings have been granted by the Dean of Guild Court for the erection of 69,645 houses since the year 1919, and it is estimated that of these linings fully two-thirds were in respect of Local Authority houses. The actual number of houses erected by the Corporation since the passing of the Housing (Scotland) Act, 1919, and completed at 31st December, 1938, was as follows:—

Ordinary Houses	...	...	...	...	22,728
Intermediate or Houses to abate Overcrowding	...	...	...	...	10,787
Rehousing Schemes	...	...	...	...	14,547
Total	...	...	...	...	<u>48,062</u>

There were 2,936 houses erected by the Corporation in 1938, of which 1,575 were for the accommodation of families living under overcrowded conditions, 627 for tenants in condemned properties, and 734 for the ordinary housing needs of the City. The number of Corporation houses built during the past five years may be shown as follows:—

Year.	No. of Houses.
1934	4,439
1935	3,926
1936	1,985
1937	1,841
1938	2,936

There was, therefore, a considerable increase in the output of new houses during 1938 as compared with the previous two years, but the numbers are still below those of the years 1934 and 1935. As has been mentioned in previous Annual Reports, the reduction in recent years has been due to a number of different circumstances, the most important of which has been the shortage of skilled building trade labour. The Corporation has had under consideration the possibility of increasing the output by alternative methods of construction which are not dependent to the same extent on skilled building trade operatives, and plans have been completed for the erection on the south side of the City of 1,000 houses of poured cellular concrete.

Attention has also been given to the practicability of erecting houses in timber, and a number of different designs for timber house walls were assembled at Kelvin Hall by the Housing Department. An inspection of these designs was made by the Housing Committee and after hearing reports from the various officials of the Corporation it was decided that the most satisfactory type of construction was that in which the walls consisted of solid western red cedar timber covered with insulated felt, strapped metal lath and finished externally with Dorset P. rough cast. Internally the walls are lined with Gyproc wall boarding with bevelled joints filled with plaster. This type of construction obviates as far as possible the danger of widespread bug infestation and an air space is provided on the outer side of the wall behind the rough cast finishing. It is hoped to build houses of this type at an early date on ground which has been acquired at Greenfields in the east end of the City.

Community Centres.—The advisability of introducing facilities for physical and mental culture and for recreational purposes in the larger housing schemes has for some time engaged the attention of the Corporation. At the present time a large Community Centre is in process of erection at Knightswood, while plans are being prepared with a view to the introduction of this important feature to other large housing schemes such as those at Blackhill, Carntyne, Balornock and Cardonald.

Housing Operations.—Every endeavour is made to co-ordinate the representation of uninhabitable properties with the provision of alternative rehousing accommodation. Comparatively few houses of this type have come forward within the last few years and as a result it has not been possible to take action regarding many undesirable properties in the City. A total of 467 houses were represented under Section 16 of the Housing (Scotland) Act, 1930, during the year. This is a reduction on last year's total of 1,228 houses but is an increase as compared with 402 houses in the previous year. Details of the houses are shown in the table on page 157. Demolition Orders were passed in 321 houses, while in 146 Closing Orders were made. The comparative figures for 1937 were 739 Demolition Orders and 483 Closing Orders.

The Paisley Road West Clearance Area Compulsory Purchase Order was confirmed on 26th August, 1938, after a Public Enquiry by the Department of Health.

Clearance of the large area at Orkney Street and Neptune Street which was commenced in 1937 has been continued. This area, as has been mentioned in previous reports, includes 721 houses, most of which are regarded as unfit for human habitation. The procedure which has been adopted by the Corporation is to deal with individual properties as alternative rehousing accommodation becomes available. At the same time negotiations are proceeding with owners with a view to the acquisition of the various subjects in the area. So far 10 tenements and 4 attics comprising a total of 247 houses have been represented. Seven of these tenements have now been demolished and the cites cleared, while the remaining 3 tenements will be demolished and the 4 attics closed whenever the tenants have been provided with alternative accommodation.

The tables on page 165 show the present position of the various schemes at the end of the year.

Decrowding Operations.—A total of 5,686 overcrowded families, 791 from Local Authority houses and 4,895 from privately owned properties, have been rehoused by the Corporation since the passing of the Housing (Scotland) Act, 1935. The vacated houses have been inspected in accordance with statutory requirements to discover

the effect of the decrowding operations, and the position at the end of the year is set out in the following table:—

Size of Houses.			No. of Houses inspected.	Over- crowding removed.	Over- crowding reduced.	Over- crowding unchanged.	Over- crowding increased.
1 Apartment	...	...	1,210	911	272	14	13
2 Apartments	...	...	3,637	2,957	460	88	132
3 Do.	...	...	776	671	53	14	38
4 Do.	...	...	63	54	8	0	1
Total			5,686	4,593	793	116	184
				80.8%	14.0%	2.0%	3.2%

Until the Appointed Day as defined in Section 86 of the Act has been fixed by the Department of Health, Local Authorities have no effective means of controlling the occupancy of decrowded houses. It is satisfactory, therefore, to observe that only 300 or 5 per cent. of the total were again occupied in excess of the "permitted number." Overcrowding was remedied in 81 per cent., while in a further 14 per cent. the conditions were improved. Opportunity was taken during the inspection to measure the floor area of the rooms of the decrowded houses in accordance with the Housing (Computation of Floor Area) Regulations (Scotland), 1935, while in addition measurement was carried out in respect of other houses in the same tenement. So far approximately 27,372 houses have been measured in this way and in only some 4 per cent. was the permitted number of occupants affected by measurement and in more than 90 per cent. of these the reduction was by only half a unit.

Sub-Letting.—Attention has been drawn in previous annual reports to the increasing practice in the City of sub-letting of individual rooms in large houses to separate families and to the difficulties owing to the general scarcity of housing accommodation in the City at the present time in dealing with this problem in a satisfactory manner. During the year, however, a number of instances of sub-letting were reported to the Master of Works for action in the Dean of Guild Court under Section 86 of the Glasgow Streets, Sewers and Buildings Consolidation Order Confirmation Act, 1937. As a result of this action it has been possible to prevent the spread of this undesirable practice in certain of the more residential parts of the City.

Housing (Agricultural Population) (Scotland) Act, 1938.—This Act which came into operation on 18th July, 1938, has for its object the amelioration of the housing conditions of the agricultural population in Scotland. It makes provision for higher Exchequer contributions than those normally payable to local authorities in respect of houses erected for the agricultural population, not only to meet the general needs but to replace unfit dwellings or to relieve overcrowding. The Act also empowers local authorities to formulate schemes to assist under certain conditions private persons in the building of new houses to replace unsatisfactory premises occupied by members of the agricultural population. In addition, Section 18 of the Act provides that a local authority shall make byelaws designed to secure a proper standard of safety and habitability in respect of bothies, chaumers and similar premises used for the accommodation of agricultural workers, while Section 19 contains a similar provision regarding the making of byelaws relative to accommodation for seasonal workers.

A survey of the City was carried out during the year to ascertain to what extent action was necessary under this Act. As a result of this survey it is estimated that there are in Glasgow at the present time 559 persons who may be regarded as falling within the meaning of the term "agricultural population." These persons reside in 136 dwelling-houses and 20 bothies or chaumers, situated for the most part in areas recently added to the City by the Glasgow Boundaries Order Confirmation Act, 1937. All the bothies and chaumers are occupied by workers in accordance with their contracts of service but only 106 dwelling-houses fall into this category, that is to say, are "tied houses." A certain number of these premises suffer from undesirable features and could be the subject of action under Section 16 of the Housing (Scotland) Act, 1930. As regards accommodation for seasonal workers, it was found that in no case in the City is accommodation for seasonal workers at present provided by the employers, the workers travelling from their houses in the morning returning at night. A report on the necessity for taking action was submitted to the Committee on Housing and after consideration the Committee agreed that Byelaws in respect of Bothies, Chaumers and Similar Premises and in respect of Accommodation for Seasonal Workers should be framed.

Byelaws on the lines of the Model Byelaws of the Department of Health for Scotland have now been drafted and will be submitted to the Department of Health for confirmation at an early date.

SUMMARY STATEMENT SHOWING POSITION WITH REGARD TO REPRESENTATIONS
MADE UNDER SECTION 16 DURING 1938.

Division.	NUMBER OF HOUSES.					NUMBER OF HOUSES.					FAMILIES REHOUSED.				
	Number of Houses Represented.	Closing Orders.	Demolition Orders.	Not to be used for Human Habitat.	To be Rerendered Fit and Occupied.	Closed.	Demolished.	Rerendered Fit and Occupied.	Converted into Business Premises.	Still Occupied.	Rehousing Scheme.	"Intermediate"	Private Property.	Unknown.	Unoccupied.
Central ...	90	39	50	1	—	35	40	—	—	15	71	—	2	2	—
Northern ...	92	33	59	—	—	9	62	—	—	21	63	2	5	—	1
Eastern ...	176	48	128	—	—	74	57	—	—	45	122	—	6	3	—
South-Eastern ...	63*	21	42	—	—	36	25	—	—	2	62	1	—	1	—
South-Western ...	46	4	42	—	—	15	—	—	—	31	15	—	—	—	—
	467	145	321	1	—	169	184	—	—	114	333	3	13	6	1

*Includes three cases of double occupancy.

DETAILED STATEMENT SHOWING POSITION WITH REGARD TO REPRESENTATIONS
MADE UNDER SECTION 16, HOUSING (SCOTLAND) ACT, 1930, DURING 1938.

PROPERTY.	NUMBER OF HOUSES.					NUMBER OF HOUSES.					FAMILIES REHOUSED.					REMARKS.	
	Number of Houses Represented.	Closing Orders.	Demolition Orders.	Not to be used for Human Habitation.	To be rendered Fit for Human Habitation.	Closed.	Demolished.	Rendered Fit and Occupied.	Converted into Business Premises.	Still Occupied.	Rehousing Scheme.	Substituted for Families Transferred.	"Intermediate" Scheme.	Private Property.	Unknown.		Unoccupied at date of Representation.
3 Dunaskin Street (F.L.)	...	11	11	—	—	11	—	—	—	—	11	—	—	—	—	—	Two tenants rehoused in one house.
5 Dunaskin Street (F.L.)	...	20	—	20	—	—	20	—	—	—	17	1	—	—	2	—	
7 Dunaskin Street (F.L.)	...	20	—	20	—	—	20	—	—	—	18	1	—	1	—	—	
4 Shaftesbury Street (F.L.)	...	6	6	—	—	6	—	—	—	—	5	—	—	1	—	—	Attics.
11 Stow Street (F.L.)	...	9	9	—	—	9	—	—	—	—	9	—	—	—	—	—	
238-250 Dawsholm Road (F.L.)	...	10	—	10	—	3	—	—	7	3	3	—	—	—	—	—	
40 Brown Street (F.L.)	...	3	2	—	1	3	—	—	—	—	3	—	—	—	—	—	Attics.
3 North Street (F.L.)	...	7	7	—	—	3	—	—	4	3	3	—	—	—	—	—	
26 Brown Street (F.L.)	...	4	4	—	—	—	—	—	4	—	—	—	—	—	—	—	
789-795 Springburn Road (F.L.)	...	16	—	16	—	—	16	—	—	—	15	—	1	—	—	—	Attic.
14 Glebe Street and 43 Stirling Road (F.L.)	...	8	8	—	—	—	8	—	—	—	4	—	1	3	—	—	
7 Lilac Place (F.L.)	...	19	—	19	—	—	19	—	—	—	18	—	—	1	—	—	
9 Lilac Place (F.L.)	...	19	—	19	—	—	19	—	—	—	18	—	—	—	—	—	Attic.
38 Glenmavis Street (B.L.)	...	1	—	1	—	1	—	—	—	—	1	—	—	—	—	—	
96 Rottenrow (F.L.)	...	1	1	—	—	1	—	—	—	—	1	—	—	—	—	—	
146 Rottenrow (F.L.)	...	1	1	—	—	1	—	—	—	—	1	—	—	—	—	—	Basement Houses. Basement House. Basement House.
600 Petershill Road (F.L.)	...	2	—	2	—	1	—	—	—	1	1	—	—	—	—	—	
122 North Frederick Street (F.L.)	...	3	3	—	—	3	—	—	—	—	3	—	—	—	—	—	
48 Cunningham Street (F.L.)	...	1	1	—	—	—	—	—	1	—	—	—	—	—	—	—	Basement House. Basement House.
95 North Hanover Street (F.L.)	...	1	1	—	—	1	—	—	—	—	1	—	—	—	—	—	
239 McAslin Street (Court) (M.D.)	...	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	
5 Torrance Street (F.L.)	...	2	2	—	—	—	—	—	—	2	—	—	—	—	—	—	1
302 Garngad Road (F.L.)	...	10	10	—	—	1	—	—	9	—	—	—	—	—	—	—	

DETAILED STATEMENT SHOWING POSITION WITH REGARD TO REPRESENTATIONS
MADE UNDER SECTION 16, HOUSING (SCOTLAND) ACT, 1930, DURING 1938.—Continued.

PROPERTY.	NUMBER OF HOUSES.					NUMBER OF HOUSES.					FAMILIES REHOUSED.					REMARKS.
	Number of Houses Represented.	Closing Orders.	Demolition Orders.	Not to be used for Human Habitation.	To be rendered Fit for Human Habitation.	Closed.	Demolished.	Rendred Fit and Occupied.	Converted into Business Premises.	Still Occupied.	Rehousing Scheme.	Substituted for Families Transferred.	" Intermediate Scheme.	Private Property.	Unknown.	Unoccupied at date of Representation.
302 Garngad Road (Back Stair)	7	7	—	—	—	—	—	—	—	7	—	—	—	—	—	—
76-78 Reid Street (F.L.) ...	16	—	16	—	—	—	16	—	—	—	14	—	—	—	2	—
80 Reid Street (F.L.) ...	16	—	16	—	—	—	16	—	—	—	16	—	—	—	—	—
195 Bluevale Street (F.L.) ...	7	—	7	—	—	—	7	—	—	—	5	—	—	2	—	—
205 Bluevale Street (East Property) (F.L.) ...	2	2	—	—	—	2	—	—	—	—	2	—	—	—	—	—
205 Bluevale Street (North Property) (F.L.) ...	3	3	—	—	—	3	—	—	—	—	2	—	—	—	1	—
205 Bluevale Street (West Property) (F.L.) ...	3	3	—	—	—	3	—	—	—	—	3	—	—	—	—	—
763, 765, 769, Duke Street, (F.L.) ...	13	13	—	—	—	—	13	—	—	—	11	—	—	2	—	—
15 Dale Street (B.L.) ...	4	4	4	—	—	4	—	—	—	—	4	—	—	—	—	—
71, 73 Megan Street (F.L.) ...	5	5	—	—	—	—	4	—	—	1	4	—	—	—	—	—
73 Megan Street (B.L.) ...	4	—	4	—	—	3	—	—	—	1	2	—	—	1	—	—
71 Tobago Street (South Property) (B.L.) ...	9	—	9	—	—	9	—	—	—	—	9	—	—	—	—	—
71 Tobago Street (North Property) (B.L.) ...	9	—	9	—	—	9	—	—	—	—	9	—	—	—	—	—
4 Pirn Street (F.L.) ...	6	6	—	—	—	6	—	—	—	—	6	—	—	—	—	—
9 Laird Place (F.L.) ...	6	6	—	—	—	6	—	—	—	—	6	—	—	—	—	—
38 Craignestock Street (Main Door and 40 Craignestock Street (North Stair) (F.L.)	4	—	4	—	—	4	—	—	—	—	4	—	—	—	—	—

36 Craignestock Street (Main Door) and 40 Craignestock Street (South Stair) (F.L.)	5	—	5	—	—	—	—	—	4	—	—	1	—	
142 Bluevale Street (F.L.) and 140, 144 Bluevale Street (Main Doors) ...	24	—	24	—	—	—	—	13	11	—	—	—	—	
66 Stevenson Street (B.L.) ...	6	—	6	—	—	—	—	—	5	1	—	—	—	
13 Crail Street (F.L.) ...	3	3	—	—	—	—	—	—	2	1	—	—	—	
17, 21 Crail Street (Main Doors) and 19 Crail Street (F.L.) ...	5	—	5	—	—	—	5	—	—	5	—	—	—	
209 Millroad Street (B.L.) ...	6	—	6	—	—	—	—	—	6	—	—	—	—	
7 Laird Place (F.L.) ...	3	3	—	—	—	—	2	—	—	1	2	—	—	
Greenfield Farm Cottage, Duror Street (F.L.) ...	1	—	1	—	—	—	1	—	—	—	1	—	—	
757 Gallowgate (North Property) (F.L.) ...	4	4	—	—	—	—	—	—	4	—	—	—	—	
44 Fordneuk Street (B.L.) ...	6	—	6	—	—	—	—	—	6	—	—	—	—	
58 Fordneuk Street (B.L.) ...	6	—	6	—	—	—	—	—	6	—	—	—	—	
44 Greenview Street (Cottage) (F.L.) ...	1	—	1	—	—	—	1	—	—	—	—	1	—	
351 Peat Road (F.L.) ...	4	—	4	—	—	—	4	—	—	—	4	—	—	
127, 129 Adelphi Street (F.L.)	2	2	—	—	—	—	2	—	—	—	3	—	—	
3, 7, 7½ Hospital Street (F.L.)	20	—	20	—	—	—	20	—	—	—	20	—	—	
2, 4 Norfolk Court (F.L.) ...	12	12	—	—	—	—	11	—	—	—	1	—	—	
6, 8, 10 Norfolk Court (F.L.)	17	—	17	—	—	—	17	—	—	—	17	—	1	
2 Adelphi Street (F.L.) ...	7	7	—	—	—	—	6	—	—	—	1	6	—	
39 Orkney Street (F.L.) ...	24	—	24	—	—	—	15	—	—	—	9	15	—	
32 Neptune Street (F.L.) ...	18	—	18	—	—	—	—	—	—	—	18	—	—	
46 Neptune Street (F.L.) ...	4	4	—	—	—	—	—	—	—	—	4	—	—	
Basement Houses, Two families in one house.														
Two families in one house.														
Two families in one house.														
Attics.														
467 145 321	1	—	169	184	—	—	114	331	2	3	13	6	1	

DETAILED STATEMENT SHOWING FURTHER ACTION TAKEN WITH REGARD TO REPRESENTATIONS
MADE IN YEARS 1933 TO 1937.

PROPERTY.	NUMBER OF HOUSES.					NUMBER OF HOUSES.					FAMILIES REHOUSED.					REMARKS.	
	Number of Houses Represented.	Closing Orders.	Demolition Orders.	Not to be used for Human Habitation.	To be rendered Fit for Human Habitation.	Closed.	Demolished.	Rendered Fit and Occupied.	Converted into Business Premises.	Still Occupied.	Rehousing Scheme.	Substituted for Families Transferred.	"Intermediate" Scheme.	Private Property.	Unknown.		Unoccupied at date of Representation.
Properties represented in 1933																	
38 St. James' Road (F.L.) ...	6	—	—	—	6	2	2	2	—	2	2	—	—	—	—	—	—
Properties represented in 1934																	Demolition delayed pending result of negotiations.
84 Harriet Street (B.L.) ...	1	—	—	—	—	1	1	—	—	—	1	—	—	—	—	—	
84 Harriet Street (F.L.) ...	2	—	—	2	—	2	—	—	—	—	2	—	—	—	—	—	
27, 29 Olympia Street (F.L.) ...	4	—	4	—	—	4	—	—	—	—	3	—	—	—	1	—	
Properties represented in 1935																	
1a to 115 Knightwood Rows (F.L.) ...	103	1	102	—	—	1	102	—	—	—	85	1	3	1	11	—	Three families rehoused in ordinary Corporation houses Two families in one house.
129 Duke Street (F.L.) ...	11	—	—	—	11	—	11	—	—	—	10	—	—	1	—	—	
127 Duke Street (F.L.) ...	1	—	—	—	1	—	1	—	—	—	1	—	—	—	—	—	
57, 63 Garngad Road (F.L.) ...	30	30	—	—	—	—	30	—	—	—	28	—	—	1	1	—	
115 Bluevale Street (F.L.) ...	16	—	16	—	—	—	16	—	—	—	14	—	1	—	1	—	
Properties represented in 1936																	
140 West Graham Street (F.L.) ...	3	3	—	—	—	3	—	—	—	—	1	—	—	—	2	—	Previous undertaking to render fit rescinded.
14 Milton Street (F.L.) ...	12	12	—	—	—	—	12	—	—	—	10	—	1	1	—	—	Main door house.
Canal Bank, Lock 22 ...	1	1	—	—	—	—	1	—	—	—	1	—	—	—	—	—	
799-801 Springburn Road (F.L.) ...	13	13	—	—	—	—	13	—	—	—	12	—	—	1	—	—	
30, 32, 34 Dale Street (F.L.) ...	7	7	—	—	—	7	—	—	—	—	3	—	—	2	2	—	Withdrawn. Undertaking accepted.
1 Anson Street (F.L.) ...	8	—	8	—	—	—	—	—	8	—	7	—	—	—	1	—	
*1-9 Copperas Row ...	9	—	9	—	—	8	—	—	—	1	—	—	—	—	—	—	

Properties represented in 1937																			
32, 34 Crimea Street, East Stair (F.L.)										13	13	—	—	—	—	1	1	1	1
45 Brown Street and 45, 47 Crimea Street (F.L.) ...										14	14	—	14	—	—	—	—	—	2
41, 43 Crimea Street (F.L.) ...										5	5	—	5	—	—	—	—	—	1
35, 37, 39 Crimea Street (F.L.) ...										6	6	—	6	—	—	—	—	—	1
6 Brown Street, West Stair (F.L.)										11	11	—	11	—	—	—	—	—	5
6 Brown Street, East Stair (F.L.)										8	8	—	8	—	—	—	—	—	—
8½ Anderson Quay (F.L.) ...										24	24	—	24	—	—	—	—	—	—
13, 15, 17 Guest Street (F.L.) ...										13	13	—	13	—	—	—	—	—	—
777 Argyle Street (Back Stair) and 14 Cranston Street (F.L.) ...										4	4	—	3	—	1	—	—	—	2
7 Argyle Street (West Property) ...										3	3	—	3	—	—	—	1	—	2
25 North Portland Street (Upper Floors)										18	18	—	18	—	—	—	—	—	—
29 North Portland Street (F.L.) ...										2	2	—	2	—	—	—	—	—	1
29 North Portland Street (F.L.) ...										10	10	—	10	—	—	—	—	—	8
Waverley Cottage, Top Long Row (F.L.)										1	1	—	1	—	—	—	—	—	—
1 Top Long Row (F.L.) ...										1	1	—	1	—	—	—	—	—	—
22, 23 Top Long Row (F.L.) ...										2	2	—	2	—	—	—	—	—	1
9 Dunaskin Street (F.L.) ...										20	20	—	20	—	—	—	1	—	—
11 Dunaskin Street (F.L.) ...										22	22	—	22	—	—	—	2	—	1
13 Dunaskin Street (F.L.) ...										22	22	—	22	—	—	—	3	—	2
127 Glebe Street and 138a Parliamentary Road (F.L.) ...										10	10	—	—	—	10	—	—	1	—

*Representation made by the County of Renfrewshire and Demolition Order agreed to on 2nd September, 1936.
Of the 8 houses shown as closed 6 were closed prior to the extension of the City boundary on 16th May, 1938.

Two families rehoused in one house.

Two families in one house.

Two families in one house.

Attics.

DETAILED STATEMENT SHOWING FURTHER ACTION TAKEN WITH REGARD TO REPRESENTATIONS
MADE IN YEARS 1933 TO 1937.—*Continued.*

PROPERTY.	NUMBER OF HOUSES.					NUMBER OF HOUSES.					FAMILIES REHOUSED.					REMARKS.
	Number of Houses Represented.	Closing Orders.	Demolition Orders.	Not to be used for Human Habitation.	To be rendered Fit for Human Habitation.	Closed.	Demolished.	Rendered Fit and Occupied.	Converted into Business Premises.	Still Occupied.	Rehousing Scheme.	Substituted for Families Transferred.	"Intermediate" Scheme.	Private Property.	Unknown.	
131 Glebe Street (F.L.) ...	9	9	—	—	—	—	—	9	—	—	8	—	—	1	—	—
138b, 144 Parliamentary Road (F.L.) ...	8	8	—	—	—	—	8	—	—	—	7	—	—	1	—	—
25, 27 Rosemount Street (F.L.) ...	17	17	—	—	—	—	17	—	—	—	17	—	—	—	—	—
20 Oakbank Street (F.L.) ...	4	4	—	—	—	—	4	—	—	—	4	—	—	—	—	—
50, 52 Bright Street (F.L.) ...	13	13	—	—	—	—	13	—	—	—	12	—	—	1	—	—
23b Stirling Road (F.L.) ...	14	14	—	—	—	—	14	—	—	—	14	—	—	—	—	—
19, 23a Stirling Road (F.L.) ...	8	8	—	—	—	—	8	—	—	—	8	—	—	—	—	—
37 Stirling Road (F.L.) ...	13	13	—	—	—	—	13	—	—	—	12	—	—	1	—	—
97-105 Maitland Street (F.L.) ...	6	6	—	—	—	6	—	—	—	—	6	—	—	—	—	—
7 Rodney Street (F.L.) ...	6	6	—	—	—	—	—	—	—	—	—	—	—	—	—	—
15 Oakbank Street (F.L.) ...	24	—	24	—	—	—	24	—	—	—	23	—	1	—	—	—
102, 102½ Maitland Street (F.L.) ...	13	13	—	—	—	13	—	—	—	—	13	—	—	—	—	—
11 Oakbank Street (F.L.) ...	20	—	20	—	—	—	20	—	—	—	20	—	—	—	—	—
58 Hopehill Road (F.L.) ...	26	—	26	—	—	26	—	—	—	—	22	—	—	2	2	—
42 Cameron Street ...	1	1	—	—	—	1	—	—	—	—	1	—	—	—	—	—
4 Lewis Street (F.L.) ...	8	—	8	—	—	—	8	—	—	—	8	—	—	—	—	—
6 Lewis Street (F.L.) ...	8	—	8	—	—	—	8	—	—	—	5	—	—	1	2	—
8 Lewis Street (F.L.) ...	8	—	8	—	—	—	8	—	—	—	7	—	—	—	1	—
10 Lewis Street (F.L.) ...	8	—	8	—	—	—	8	—	—	—	8	—	—	—	—	—
12 Lewis Street (F.L.) ...	8	—	8	—	—	—	8	—	—	—	8	—	—	—	—	—
14 Lewis Street (F.L.) ...	8	—	8	—	—	—	8	—	—	—	8	—	—	—	—	—
5 River Street (F.L.) ...	8	—	8	—	—	—	8	—	—	—	8	—	—	—	—	—
7 River Street (F.L.) ...	7	7	—	—	—	—	7	—	—	—	7	—	—	—	—	—
9 River Street ...	8	—	8	—	—	—	8	—	—	—	8	—	—	—	—	—

Houses closed and property demolished before decision made.

Ground Flat house.

DETAILED STATEMENT SHOWING FURTHER ACTION TAKEN WITH REGARD TO REPRESENTATIONS
MADE IN YEARS 1933 TO 1937.—*Continued.*

PROPERTY.	NUMBER OF HOUSES.					NUMBER OF HOUSES.					FAMILIES REHOUSED.							REMARKS.
	Number of Houses Represented.	Closing Orders.	Demolition Orders.	Not to be used for Human Habitation.	To be rendered fit for Human Habitation.	Closed.	Demolished.	Rendered fit and Occupied.	Converted into Business Premises.	Still Occupied.	Rehousing Scheme.	Substituted for Families Transferred.	" Intermediate" Scheme.	Private Property.	Unknown.	Unoccupied at date of Representation.		
1 Norfolk Court (F.L.)	20	20	—	—	—	20	—	—	—	—	21	—	—	—	—	—	—	Two families in one house.
84 Abbotford Place (B.L.)	8	—	8	—	—	—	8	—	—	—	7	—	—	1	—	—	—	Two families in one house.
40 Cavendish Street (B.L.)	3	—	3	—	—	—	3	—	—	—	4	—	—	—	—	—	—	Two families in one house.
42 Cavendish Street (B.L.)	8	—	8	—	—	—	8	—	—	—	8	—	—	—	—	—	—	Two families in one house.
21, 23 Thistle Street (F.L.)	3	—	3	—	—	—	3	—	—	—	3	—	—	—	—	—	—	Two families in one house.
325 Eglinton Street (First B.L.)	3	—	3	—	—	—	3	—	—	—	3	—	—	—	—	—	—	Two families in one house.
325 Eglinton Street (Second (B.L.)	13	—	13	—	—	—	13	—	—	—	13	—	—	—	—	—	—	Two families in one house.
49, 51, 53 Cavendish Street (F.L.)	11	—	11	—	—	—	11	—	—	—	11	—	—	—	—	—	—	Two families in one house.
55, 57 Cavendish Street (F.L.)	12	—	12	—	—	—	12	—	—	—	12	—	—	—	—	—	—	Two families in one house.
57 Cavendish Street (B.L.)	5	5	5	—	—	—	5	—	—	—	5	—	—	—	—	—	—	Two families in one house.
9 Cavendish Place (B.L.)	16	—	16	—	—	—	16	—	—	—	9	—	—	—	—	—	—	Two families in one house.
27, 29 Orkney Street (F.L.)	26	26	26	—	—	—	26	—	—	—	19	2	—	5	—	—	—	Two families in one house.
35 Orkney Street (F.L.)	24	—	24	—	—	—	24	—	—	—	20	—	—	3	—	—	—	Two families in one house.
37 Orkney Street (F.L.)	24	—	24	—	—	19	—	—	—	5	19	—	—	—	—	—	—	Two families in one house.

HOUSING ACTS.

*Number of houses represented since 1923 and
action taken.*

Year. Parlia- mentary Road Scheme	Number of Houses represented.			Number of these Houses actually closed in each Year.		
	Under Slum Clearance Schemes*	Under Closing and Demolition Orders	Together.	Slum Clearance Schemes.	Closing and Demolition Orders.	Together.
(1917) ...	121	—	121	—	—	—
1923 ...	1,858	—	1,858	163	—	163
1924 ...	—	—	—	528	—	528
1925 ...	—	7	7	385	—	385
1926 ...	1,052	2	1,054	504	2	506
1927 ...	2,125	73	2,198	768	14	782
1928 ...	—	80	80	750	92	842
1929 ...	1,288	166	1,454	952	84	1,036
1930 ...	—	247	247	1,056	254	1,310
1931 ...	131	559	690	924	372	1,296
1932 ...	393	505	898	412	601	1,013
1933 ...	573	872	1,445	535	620	1,155
1934 ...	786	2,126	2,912	263	1,437	1,700
1935 ...	159	2,011	2,170	711	2,028	2,739
1936 ...	131	402	533	330	1,062	1,392
1937 ...	44	1,228	1,272	264	1,039	1,303
1938 ...	—	467	467	89	914	1,003
	8,661	8,745	17,406	8,634	8,519	17,153

* The date of the Clearance Resolution by the Corporation has been taken as the year of representation. The 1928 Scheme is thus included against the year 1927.

SLUM CLEARANCE AND REHOUSING.

During the post-war period the Corporation has represented a total of 17,406 houses under the various Housing Acts. Of these, 8,661 were dealt with by clearance schemes and 8,745 by Closing

or Demolition Orders. The following tables show separately the position with regard to these houses as at the end of 1938:—

HOUSES DEALT WITH UNDER CLOSING AND DEMOLITION ORDERS.

Year.	NUMBER OF HOUSES.					
	No. of Houses represented.	Closed.	Demolished.	Converted to Business Premises.	Rendered Fit and Occupied.	Still Occupied.
1924-1930— (Under 1925 Act) ...	448	75	360	7	6	—
1930— (Under 1930 Act) ...	127	34	85	—	8	—
1931 ...	559	120	426	1	12	—
1932 ...	505	120	376	7	2	—
1933 ...	872	296	564	—	10	2
1934 ...	2,126	513	1,592	4	14	3
1935 ...	2,011	688	1,283	1	5	34
1936 ...	402	230	162	9	1	—
1937 ...	*1,228	372	827	14	—	9
1938 ...	467	169	184	—	—	114
Totals ...	8,745	2,617	5,859	43	58	162

* Includes 6 houses demolished by Proprietor before decision made.

HOUSES DEALT WITH UNDER SLUM CLEARANCE SCHEMES.

SCHEME.		NUMBER OF HOUSES.				Total Houses in Scheme.
		Demolished.	Converted to Business Premises.	Closed.	Still Occupied.	
Parliamentary Road						
Scheme ...	...	121	—	—	—	121
1923 Scheme ...	...	1,858	—	—	—	1,858
1926 Scheme ...	...	1,052	—	—	—	1,052
1927 Scheme ...	...	1,019	—	—	—	1,019
1928 Scheme ...	...	1,106	—	—	—	1,106
1930 Scheme ...	...	1,288	—	—	—	1,288
Old Shettleston Road						
Area ...	...	131	—	—	—	131
Landressy Street Area ...	...	168	—	—	—	168
Garscube Road Area ...	...	225	—	—	—	225
Garngad Road Area ...	...	573	—	—	—	573
Dalmarnock Road Area ...	...	412	—	—	—	412
Whitehall Street Area ...	...	90	—	—	—	90
William Street Area ...	...	161	—	—	—	161
Shaftesbury Lane Area ...	...	35	—	—	—	35
Green Street Area ...	...	11	—	15	—	26
Warp Lane Area ...	...	62	—	—	—	62
Eastvale Place Area ...	...	50	—	—	—	50
Castlebank Street Area ...	...	109	—	—	—	109
Burnside Street Area ...	...	105	—	—	—	105
Gallowgate (back land) Area ...	...	—	—	—	26	26
Paisley Road West Area ...	...	35	—	8	1	44
		8,611	—	23	27	8,661

Further details of schemes which were not completed at the end of 1937 are given in the following notes. No new schemes were commenced during the year.

(a) *Dalmarnock Road Clearance Area*.—During the year 33 houses were closed and 58 houses were demolished, the scheme now being completed.

No. of Houses.	One Apt.	Two Apts.	Three Apts.	Four Apts. and over.	Total.
Closed and demolished prior to 31st December, 1935	28	28	1	—	57
Closed at commencement of scheme and demolished in 1936	2	—	1	—	3
Closed at commencement of scheme and demolished in 1937	—	—	—	—	—
Closed at commencement of scheme and demolished in 1938	1	—	—	—	1
Closed in 1935 and demolished in 1936	33	28	6	—	67
Closed in 1936 and demolished in 1936	63	93	26	—	182
Closed in 1936 and demolished in 1937	2	1	—	—	3
Closed in 1936 and demolished in 1938	4	6	1	—	11
Closed in 1937 and demolished in 1937	21	18	2	—	41
Closed in 1937 and demolished in 1938	5	9	—	—	14
Closed in 1938 and demolished in 1938	17	15	1	—	33
	176	198	38	—	412

No. of Families.	Prior to 31/12/37.	During 1938.	Total.
Transferred to Rehousing Schemes	341	25	366
For whom " Substitution " arranged	31	4	35
Who did not take up Scheme Houses and removed elsewhere	21	6	27
	393	35	428

(b) *Shaftesbury Lane Clearance Area*.—This scheme is now completed by the demolition of 24 houses during the year.

No. of Houses.	One Apt.	Two Apts.	Three Apts.	Four Apts. and Over.	Total.
Closed at commencement of scheme and demolished in 1937	2	—	—	—	2
Closed in 1936 and demolished in 1937	1	7	—	—	8
Closed in 1936 and demolished in 1938	3	20	—	—	23
Closed in 1937 and demolished in 1937	—	1	—	—	1
Closed in 1937 and demolished in 1938	1	—	—	—	1
	7	28	—	—	35

No. of Families.	Prior to 31/12/37.	During 1938.	Total.
Transferred to Rehousing Schemes	30	—	30
For whom " Substitution " arranged	1	—	1
Who did not take up Scheme Houses and removed else- where	2	—	2
	33	—	33

(c) *Green Street Clearance Area*.—To complete this scheme 15 houses still remain to be demolished.

No. of Houses.	One Apt.	Two Apts.	Three Apts.	Four Apts. and Over.	Total.
Closed in 1936 and not demolished at 31st December 1938	2	—	1	—	3
Closed in 1937 and demolished in 1937	—	11	—	—	11
Closed in 1937 and not demolished at 31st December 1938	9	1	2	—	12
	11	12	3	—	26

No. of Families.	Prior to 31/12/37.	During 1938.	Total.
Transferred to Rehousing Schemes	23	—	23
For whom " Substitution " arranged	4	—	4
Who did not take up Scheme Houses and removed else- where	1	—	1
	28	—	28

(d) *Castlebank Street Clearance Area*.—Twenty houses in this area were demolished during the year so that the scheme is now complete.

No. of Houses.	One Apt.	Two Apts.	Three Apts.	Four Apts. and Over.	Total.
Closed at commencement of scheme and demolished in 1937	1	—	—	—	1
Closed in 1936 and demolished in 1937	12	5	—	—	17
Closed in 1936 and demolished in 1938	2	—	—	—	2
Closed in 1937 and demolished in 1937	25	45	1	—	71
Closed in 1937 and demolished in 1938	18	—	—	—	18
	58	50	1	—	109

No. of Families.				Prior to 31/12/37.	During 1938.	Total.
Transferred to Rehousing Schemes	...	...	...	96	—	96
For whom "Substitution" arranged	...	...	...	9	—	9
Who did not take up Scheme Houses and removed elsewhere	...	...	...	8	—	8
				113	—	113

(e) *Burnside Street Clearance Area*.—During the year 14 houses were closed and 73 were demolished, thus completing the scheme.

No. of Houses.	One Apt.	Two Apts.	Three Apts.	Four Apts. and Over	Total.
Closed in 1937 and demolished in 1937	1	31	—	—	32
Closed in 1937 and demolished in 1938	20	35	4	—	59
Closed in 1938 and demolished in 1938	10	4	—	—	14
	31	70	4	—	105

No. of Families.				Prior to 31/12/37.	During 1938.	Total.
Transferred to Rehousing Schemes	...	...	...	80	9	89
For whom "Substitution" arranged	...	...	...	1	2	3
Who did not take up Scheme Houses and removed elsewhere	...	...	...	11	4	15
				92	15	107

(f) *Gallowgate (Back Land) Clearance Area*.—No action was taken during the year with regard to closing or demolition of any of the houses in this scheme which consists of 26 houses, 8 of one-apartment, 16 of two-apartments, and 2 of three-apartments.

(g) *Paisley Road West Clearance Area*.—During the year 43 houses were closed and 36 demolished in this scheme which consists of 44 houses.

No. of Houses.	One Apt.	Two Apts.	Three Apts.	Four Apts. and Over.	Total.
Closed in 1938 and demolished in 1938	7	25	2	—	34
Closed in 1938 and not demolished at 31st December 1938	—	6	2	—	8
Closed at commencement of scheme and demolished in 1938	—	1	—	—	1
Still in occupation at 31st December, 1938	—	1	—	—	1
	7	33	4	—	44

No. of Families.	During 1938.	Total.
Transferred to Rehousing Schemes	42	42
For whom " Substitution " arranged	2	2
Who did not take up Scheme Houses and removed elsewhere ...	1	1
	<hr/> 45	<hr/> 45
Still to be provided for at 31st December 1938		1
		<hr/> 46

INSPECTION OF REHOUSING SCHEMES BY NURSE INSPECTORS.

By Dr. W. C. Gunn.

BUG INFESTATION AND CLEANLINESS.

The number of houses in the various rehousing schemes reported upon is 14,416. There are 19 nurse inspectors supervising the rehousing schemes and, in addition to the maintenance of a high standard of cleanliness in these houses their work includes the prevention of infestation by the bed bug.

The nurse inspectors have reported that 68.1 per cent. of the houses were clean, 31.2 per cent. fair, and 0.7 per cent. dirty. This small percentage of dirty houses represents in all 101 houses throughout the various schemes.

The total number of houses in which evidence of the presence of bed bugs was found was 447, or 3.1 per cent., compared with 5.2 per cent. in 1937. An analysis of this figure shows that only a "trace" of bed bugs was found in 138 houses, or 0.9 per cent., compared with 1.8 per cent. in 1937. In this group of houses only old hatched eggs or bug casts, but no living bugs or eggs, were found in the beds or on furniture, pictures or other household belongings. In 69 houses, or 0.5 per cent., compared with 1.2 per cent. in 1937, a "medium" degree of infestation was found, and by this is meant that living bugs or eggs were found in beds, or on furniture, pictures or other household belongings, but not in the structure of the building itself. This condition is readily remedied by the tenants by applying the ordinary methods of household cleansing under the direction of the nurse inspectors. In 240 houses, or 1.7 per cent., compared with 2.2 per cent. in 1937, a "serious" degree of infestation was found. In these houses living bugs or eggs or both were found in beds, on furniture or on pictures, and also in the structures of the apartments, such as picture rails,

skirting and door facings. The eradication of bugs in these houses requires the co-operation of the tradesmen from the Maintenance Section of the Housing Department, whose procedure is to remove the infested woodwork from the walls and apply the blow-lamp directly or a contact insecticide. In the great majority of these houses infestation was detected at a fairly early stage by the nurse inspectors. This is very important because it reduces, to a marked degree, the amount of interference with structures, which has to be carried out by the tradesmen. In no houses throughout the year was fumigation by a lethal gas adopted.

The table submitted herewith shows the progress made during the past five years in the prevention of bug infestation which has fallen from 10.7 per cent. in 1934, to 3.1 per cent. in 1938. It should be noted that serious infestation has fallen progressively during that period from 7.1 per cent. to 1.7 per cent. throughout the rehousing schemes. This progress is further proof that the preventive system which has been practised in Glasgow during the past decade is thoroughly sound, as it depends for its success upon the cleanliness of tenants and the supervision of them by the nurse inspectors who are specially trained in the work of prevention of infestation by the bed bug.

PROGRESS OF BUG-INFESTATION PREVENTION IN REHOUSING SCHEMES.

				Number of Houses Inspected.	Number of Houses in which Bed Bugs were found.		
					Trace of Bugs.	Medium Infestation.	Serious Infestation.
1934	...	...	...	8,670	104 1.2%	210 2.4%	612 7.1%
					Total, 926=10.7%		
1935	...	...	...	10,576	218 2.1%	368 3.5%	378 3.6%
					Total, 964=9.2%		
1936	...	...	...	12,803	220 1.7%	296 2.3%	295 2.3%
					Total, 811=6.3%		
1937	...	...	...	13,676	253 1.8%	165 1.2%	304 2.2%
					Total, 722=5.2%		
1938	...	...	...	14,416	138 0.9%	69 0.5%	240 1.7%
					Total, 447=3.1%		

CONDITIONS AS TO CLEANLINESS IN SLUM CLEARANCE REHOUSING SCHEMES.

Details are given in preceding annual reports of the duties undertaken by the nurse inspectors of the Department in supervising the condition of the houses provided by the Corporation for families transferred from clearance areas. Generally speaking, satisfactory tenants are visited once in three months while others are visited more frequently. During 1938 the nurse inspectors made 66,904 primary visits, the condition of the houses being recorded at the time of the visit as—"clean," 45,156; "fair," 20,082; "unsatisfactory," 1,318; "dirty," 348. Further visits numbering 2,998 were made to the less satisfactory tenants to ensure that the instructions given as to cleansing had been duly carried out.

At the beginning of the year 13,673 households were under supervision, and at the end of the year 14,521—an increase of 848. The number of new tenants was 1,173 in addition to 64 tenants in a rehousing scheme of another local authority which came within the extended boundaries of the City during the year. There were 389 removals, or about 2.7 per cent. of the total occupancies.

No. of tenants under supervision at 1st January, 1938		13,673	
Of which evicted or left owing rent during 1938 ...	184		
Of which left voluntarily during 1938	178		
		<hr/> 362	
Of which remaining at 31st December, 1938 ...		<hr/>	13,311
No. of tenants obtaining entry during 1938		1,173	
Of which evicted or left owing rent during 1938 ...	13		
Of which left voluntarily during 1938	14		
		<hr/> 27	
Of which remaining at 31st December, 1938 ...		<hr/>	1,146
No. of tenants in rehousing scheme of other local authority taken over during 1938, all of whom were remaining at 31st December, 1938			<hr/> 64
Total number of tenants remaining as at 31st December, 1938			<hr/> <hr/> 14,521

For the purpose of the following analyses the general cleanliness of each household as recorded at the beginning of the year, at the date of entry, or at the date of coming within the City area and at the end of the year or at the date of removal has been used.

In the first analysis the changes in the condition of the 13,311 households which were under supervision throughout the whole year are shown.

				Condition at end of Year.			Totals.	Group Per- centages.
				Clean.	Fair.	Dirty.		
Condition at beginning of year :—								
Clean	...	...	...	8,734	411	—	9,145	68·7
Fair	...	...	...	613	3430	34	4,077	30·6
Dirty	...	...	...	2	36	51	89	0·7
Totals	...	...	...	9,349	3,877	85	13,311	100·0
Group Percentages	...	...	...	70·2	29·1	0·7	100·0	—

It will be observed that there have been quite a number of changes in the classification of individual houses. The proportion of households noted as "clean" at the beginning of the year was 68·7 per cent. as against 70·2 per cent. at the end, while the respective percentages of those designated as "fair" were 30·6 per cent. and 29·1 per cent. The proportion of households classified as "dirty" was the same at the beginning and at the end of the year, viz., 0·7 per cent. "Fair" tenants, numbering 613, and 2 "dirty" tenants had progressed sufficiently during the year to be classified as "clean," and 36 "dirty" tenants to be classified as "fair." On the other hand, 411 tenants who had been classified as "clean" at the beginning of the year were transferred to the "fair" category, and 34 of the "fair" tenants were relegated to the "dirty" category. The majority of the tenants (12,215), however, showed no change—8,734 being reported as "clean," 3,430 as "fair," and 51 as "dirty," both at the beginning and at the end of the year.

A similar table is given below for the 1,146 tenants who obtained entry during the year and who were still resident in the schemes at the close.

				Condition at end of Year.			Totals.	Group Per- centages.
				Clean.	Fair.	Dirty		
Condition at date of entry—								
Clean	...	...	...	547	36	—	583	50·9
Fair	...	...	...	67	477	—	544	47·5
Dirty	...	...	...	—	5	14	19	1·6
Totals	...	...	...	614	518	14	1,146	100·0
Group Percentages	...	...	...	53·6	45·2	1·2	100·0	—

Here again it will be observed that the majority of the tenants have remained in the category in which they were placed on entry to the schemes. Against the retrogression of 36 tenants who were designated "clean" on entry and who were classified as "fair" at the close of the year, there is to be recorded the fact that improvement was noted by 67 "fair" tenants being transferred to the "clean" group and 5 "dirty" tenants becoming "fair." The standard of cleanliness of the tenants securing entry during the year is not as high as that of the tenants who have been in residence for the full year—53.6 per cent. as against 70.2 per cent. "clean," 45.2 per cent. as against 29.1 per cent. "fair," and 1.2 per cent. as against 0.7 per cent. "dirty."

The 64 tenants in the housing scheme of another Local Authority which came within the extended boundaries of the City during the year remained constant throughout, the classification being 58 "clean," 3 "fair," and 3 "dirty." This represents 90.6 per cent., 4.7 per cent., and 4.7 per cent. respectively.

The condition prior to removal of the houses occupied by families who were evicted or left owing rent and by tenants removing voluntarily during the year is compared in the following table:—

Condition at date of removal—					Tenants Evicted during 1938.		Tenants Removing Voluntarily during 1938.	
					Number	Group Per- centage.	Number.	Group Per centage.
Clean	...	...	...	...	53	26.9	143	74.5
Fair	...	...	...	...	134	68.0	49	25.5
Dirty	...	...	...	...	10	5.1	—	—
					197	100.0	192	100.0

The composition of the group of tenants who removed voluntarily is slightly higher than the general standard but that of the tenants evicted is considerably below the average.

Of the 14,521 houses occupied at the end of the year, 10,021 were recorded as "clean," 4,398 as "fair," and 102 as "dirty," representing 69.0 per cent., 30.3 per cent., and 0.7 per cent. of the total. The corresponding percentages for occupancies as at the end of 1937 were 68.3, 31.0 and 0.7.

REHOUSING OF TUBERCULOUS FAMILIES.

By a resolution of the Corporation made in 1929, 10 per cent. of the "Intermediate" houses were set aside for families where a tuberculous individual lives under overcrowded conditions. The allocation of the houses is made by the General Manager, City Improvements Department, on the recommendation of the Medical Officer of Health, and the following table shows the position at 31st December, 1938, of the applications recommended since the inception of the scheme:—

	Year Recommended.		
	1929-37	1938	Total
Recommendations "... .."	2,986	292	3,278
1. <i>Rehoused</i>	1,222	35	1,257
2. <i>No further action to be taken—</i>			
Income over "Intermediate" scale and refuse ordinary Corporation house	8	—	8
Refuse house offered	37	—	37
Left Glasgow	15	—	15
Do not now wish rehoused	31	—	31
Patient dead	135	—	135
City Improvements Department report they will take no further action ...	11	—	11
No tuberculous patient in family ...	8	—	8
Rehoused in non-Corporation houses on own account	63	—	63
	308	—	308
3. <i>Cannot afford "Intermediate" rentals—</i>			
Waiting for Slum Clearance Houses by substitution	41	—	41
Cannot pay rental of scheme desired ...	3	—	3
Cannot afford "Intermediate" rentals	106	—	106
Wish application held over meantime	50	—	50
Unsatisfactory reference	27	—	27
Will only take house which does not relieve overcrowding	12	—	12
	239	—	239
4. <i>Position uncertain—</i>			
City Improvements Department still to report	443	256	699
Application lapsed	369	—	369
No reply to p.c. from City Improve- ments Department	78	—	78
Gone away and cannot be traced ...	39	—	39
	929	256	1,185
5. <i>Waiting for Rehousing—</i>			
Waiting for particular schemes ...	179	—	179
Overcrowding not serious—not urgent	21	—	21
Waiting	88	—	88
	288	—	288

SUMMARY OF FAMILIES REHOUSED AT 31ST DECEMBER, 1938.

Year	Rehoused during											
	recommended	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	Total
1929	68	40	25	5	5	4	4	—	—	—	151
1930	—	22	49	13	6	7	2	1	1	—	101
1931	—	—	26	44	8	7	2	2	—	—	89
1932	—	—	—	23	16	14	4	8	2	—	67
1933	—	—	—	—	18	28	9	6	3	—	64
1934	—	—	—	—	—	144	91	24	4	—	263
1935	—	—	—	—	—	—	166	78	30	5	279
1936	—	—	—	—	—	—	—	63	43	16	122
1937	—	—	—	—	—	—	—	—	42	44	86
1938	—	—	—	—	—	—	—	—	—	35	35
		68	62	100	85	53	204	278	182	125	100	1,257

RENT AND MORTGAGE INTEREST (RESTRICTIONS) ACTS,
1920 TO 1923.

Applications for Certificates by Tenants.—During the year 35 applications for certificates, in terms of Section 2 (2) of the principal Act, were received, compared with 44 for 1937. Of these, 11 were cancelled, 4 were refused and 20 granted, all in respect that the houses were not in a reasonable state of repair.

The following summary shows the distribution of the applications throughout the several administrative divisions, and gives comparative figures for each year since the Act came into operation:—

GLASGOW, 1938.—APPLICATIONS FOR CERTIFICATES UNDER
SECTION 16 (2) OF THE INCREASE OF RENT AND MORTGAGE
INTEREST (RESTRICTIONS) ACT, 1920.

Division.	Refused.	Granted in respect that Houses were—	
		(1) Not in all respects reasonably fit for human habitation.	(2) Not in a reasonable state of repair.
Central ...	—	—	—
Northern ...	4	—	2
Eastern ...	—	—	1
South-Eastern ...	—	—	3
South-Western ...	—	—	14
City ...	4	—	20
		20	
1920 (Oct. to Dec.) ...	147	263	459
1921-1925 ...	219	434	653
1926-1930 ...	29	200	229
1931 ...	6	121	98
1932 ...	12	126	95
1933 ...	8	—	48
1934 ...	6	—	59
1935 ...	17	—	105
1936 ...	4	—	65
1937 ...	10	—	14
1938 ...	4	—	20

Applications for Reports by House Factors and Owners.—In Section 5 (2) of the 1923 Act it is provided that where a certificate has been issued by the Sanitary Authority, in accordance with the provisions of Section 2 (2) of the principal Act of 1920, and the house factor or owner afterwards executes the repairs required to put their houses into a reasonable state of repair, he shall be entitled to receive a report to that effect on making application to the Sanitary Authority, and on payment of a fee of one shilling. During the year no applications were received.

The following summary shows the distribution of the applications throughout the several administrative divisions, and gives comparative figures for previous years:—

GLASGOW, 1938.—APPLICATIONS FOR REPORTS BY HOUSE
FACTORS OR OWNERS UNDER SECTION 5 (2) RENT AND
MORTGAGE INTEREST (RESTRICTIONS) ACT, 1923.

Division.						Applications.	
						Granted.	Refused.
Central	...	...	...	...	...	—	—
Northern	...	...	...	...	...	—	—
Eastern	...	...	...	...	...	—	—
South-Eastern	...	...	...	...	...	—	—
South-Western	...	...	...	...	...	—	—
						—	—
						}	
						—	
1923-1925	...	...	...	...	...	40	1
1926-1930	...	...	...	...	...	6	2
1931	...	...	...	...	...	6	1
1932	...	...	...	...	...	36	1
1933	...	...	...	...	...	13	—
1934	...	...	...	...	...	14	—
1935	...	...	...	...	...	37	1
1936	...	...	...	...	...	9	4
1937	...	...	...	...	...	—	5
1938	...	...	...	...	...	—	—

SECTION IX.

BACTERIOLOGICAL LABORATORY.

Report by Dr. W. R. WISEMAN, City Bacteriologist.

The specimens submitted and reported upon in 1938 numbered 46,080, the figure for the previous year being 44,759. The summary at the end shows that the sources of the specimens were Public Health Department (27,867), Medical Practitioners (15,728), and Other Local Authorities (2,485). The category "Medical Practitioners" comprises private practitioners (the majority) and certain institutions in the City other than those of the Corporation, the specimens relating to the possibility of infectious disease. The nature of the work carried on is best seen by classifying it as follows:—

(1) *Specimens from Cases of Suspected Infectious Disease.*—These constitute the bulk of the routine work, and are submitted for diagnosis in relation to the various forms of tuberculosis, diphtheria, enterica fevers, dysentery, venereal diseases, ophthalmia neonatorum, scarlet and puerperal fever, various forms of meningitis, pneumonia, anthrax, plague (in rats), and undulant fever. The routine work also involves the examination of contacts and the investigation of possible sources of infection in connection with epidemic outbreaks of disease.

(2) *Miscellaneous Investigations.*—These differ from the preceding group in that no particular bacterial cause is suggested by the clinician. Many of them, therefore, call for general bacteriological scrutiny, and sometimes require extended work with repeated specimens. The materials are such as (a) intestinal contents and urine for evidence of infection of more unusual types; (b) food-stuffs as to fitness for consumption, or in connection with illness suspected to be related to their consumption, and cases of illness connected therewith; (c) skin, hair, etc., for parasites; (d) tissues for evidence of tumour formation or other change of structure; (e) blood and other materials for research in obscure cases.

(3) *Examination of Water and Milk Supplies.*—Samples of the City water supplies are taken at regular intervals from distributing pipes and from the Gorbals, Mugdock, and Craigmaddie reservoirs for examination of their bacterial content with respect to maintenance of their standard of purity. Analyses of the water in the ponds of the public baths are also made at regular intervals and reported to the Baths Department. Examination of the milk supply of the City and the City's hospitals constitutes a considerable part of the routine work of the laboratory. The supplies are tested in regard to bacterial content as a measure of purity and in regard to tuberculous infection.

(4) *Biological Tests.*—These tests are an essential part of the procedure in examining milk for the presence of the tubercle bacillus, and are commonly used for the detection of this organism in pleural and cerebro-spinal fluids, sputum, and urine. They are employed to distinguish the bovine from the human type of tubercle bacillus and to determine the type of infecting organism in cases of pneumonia in which the appropriate serum for treatment may be indicated by the information so derived. By means of such tests we ascertain the virulence or otherwise of organisms isolated from diphtheria patients, carriers, and contacts, and make the diagnosis of certain infections such as anthrax, infective jaundice, etc.

DIPHTHERIA.

Practitioners sending in swabs for diphtheria receive a fresh outfit along with every report. All reports are based upon microscopical examination of the cultures obtained from the swabs submitted. The results are conveyed by telephone on the morning after the swabs are received, this being followed up by the sending out of a written record of the examination.

During the year, 11,361 swabs were examined for the presence of the diphtheria bacillus, and were derived from patients, from contacts, and from children as a preliminary to admission to the Corporation Country Homes.

(1) *Suspected Cases.*—10,108 swabs were examined, 1,538 being positive, or 15.2 per cent. This compares with 12.5 per cent. in 1937, and 13.1 per cent. in 1936.

(2) *Contacts.*—1,090 contacts were examined, 37 being positive, or 3.4 per cent.

(3) *Pre-admission Examinations.*—163 swabs from 147 children were examined, with results as follows:—

			Number of Children.	Swabs.	Children with virulent <i>B. diphtheriae</i> .
M.O.H.	...	...	131	131	—
Practitioners	...	...	16	32	—

The number 131 from the Health Department were all throat swabs, while those from practitioners were 16 throat and 16 nasal swabs.

Biological and Cultural Tests.—These tests are applied for the purpose of ascertaining the virulence or otherwise of diphtheria-like organisms. Differentiating cultural tests are first applied to establish the identity of such an organism, particularly when it occurs in regions other than the throat, and in those cases which prove to be *Bacillus diphtheriae* the biological test is applied to determine virulence. During the year, 272 cultures were so examined. 218 of these were *B. diphtheriae*, 146 being biologically virulent, and 1 vaginal, 15 nasal and 3 ear cultures being reported positive and considered virulent on clinical grounds. 53 were non-virulent diphtheria cultures, while 54 were proved by cultural means to be corynebacteria other than *B. diphtheriae*. The sources and results were as follows:—

				Number tested.	Virulent.	Non-virulent.
(a) Throat swabs	...	...	...	96	58	38
(b) Nasal swabs	...	...	...	129	84	45
(c) Ear swabs	...	...	...	37	16	21
(d) Eye swabs	...	...	...	2	2	—
(e) Vaginal swabs	...	...	...	7	4	3
(f) Anal swab	...	...	...	1	1	—
				<u>272</u>	<u>165</u>	<u>107</u>

The identity and source of the 107 non-virulent diphtheria-like organisms are seen in the following table:—

			<i>B.</i> <i>diphtheriae</i> .	<i>B.</i> <i>hofmanni</i> .	<i>B.</i> <i>xerosis</i> .	Total.
Throat	...	...	24	7	7	38
Nose	...	...	20	16	9	45
Ear	...	...	6	—	15	21
Vagina	...	...	3	—	—	3
			<u>53</u>	<u>23</u>	<u>31</u>	<u>107</u>

The specimens subjected to biological tests as above were submitted from the following sources:—

	Virulent.	Non-virulent.
Corporation Fever Hospitals	72	26
Medical Officer of Health	21	7
Practitioners	16	7
Other Hospitals	37	13
	<hr/> 146 <hr/>	<hr/> 53 <hr/>

Types of Diphtheria Bacillus.—There was a sharp rise in the frequency of occurrence of *B. diphtheriæ gravis* isolated from the positive swabs sent to the laboratory during the year. The monthly percentage incidence varied from 23 per cent. in March to 49 per cent. in December, the average for eleven months of the year (September excluded) being 37 per cent. These figures may be compared with averages of 12.6 per cent. for the last quarter and 9.1 per cent. for the first quarter of the previous year.

Coincidentally, *B. diphtheriæ intermedius*, the type also frequently associated with severe forms of diphtheria, showed a fall in incidence of about 10 per cent., and there were also smaller diminutions in the numbers of the *mitis* type and of anomalous strains.

In addition to the examination of over 1,000 strains in the laboratory for the purpose of watching the type frequency among the community, 38 strains were typed at the request of Belvidere and Ruchill Hospitals, the majority (36) being from the former institution. Of these 18 proved to be of *gravis* type, 14 *intermedius*, 4 *mitis*, 1 Type IV and 1 a mixture of *gravis* and *intermedius* types.

ENTERICA GROUP.

Examination of Blood.—Agglutination tests for the diagnosis of typhoid and paratyphoid fever were done with 128 specimens of blood from 128 persons.

SOURCES OF MATERIAL AND RESULTS IN BLOOD TESTS.

	Positive typhoid.	Positive para. B.	Doubtful.	Negative.	Total.
Cases of illness	7	3	7	106	123
Contacts ...	1	—	—	4	5
	<hr/> 8 <hr/>	<hr/> 3 <hr/>	<hr/> 7 <hr/>	<hr/> 110 <hr/>	<hr/> 128 <hr/>

Examinations of Excretions.—The total number of specimens examined from cases, convalescents, contacts and carriers was 1,410 (fæces, 744; urine, 636). The positive results in the total number of specimens were:—

				Positive B. typhosus.	Positive B. para. B.
Faeces	...	...	...	37	90
Urine	...	...	...	24	36
				—	—
				61	126
				==	==

(1) *Typhoid Findings.*—The 61 positives were from 13 cases, 3 contacts and 7 carriers.

(2) *Paratyphoid Findings.*—The 126 positives were from 40 cases, 4 contacts, and 3 carriers. One of the cases has become a carrier.

No outbreak of disease under this group occurred during the year.

DYSENTERY AND FOOD POISONING.

Dysentery.—The total number of specimens examined from suspected cases of dysentery shows an increase of almost 9 per cent. over last year's figure.

During the early months of the year the laboratory continued to help in the investigation of the outbreak of dysentery in the Southern General Hospital and in this connection 271 samples were examined, of which 113 were repeat specimens. In 9 instances *B. dysenteriae* (Sonne) was isolated.

The Sonne type of infection again became predominant after the relative decrease in 1937, and the number of specimens yielding the Flexner type of organism was the smallest for some years. The ratio of Sonne to Flexner cases was more than 4 to 1.

During the period under review 1,083 specimens from 836 persons, including repeats for clearances, were submitted to investigation. No carriers were found. As usual, microscopical examinations of all samples were made.

The following table summarises the sources of the material and the results of examination:—

	B. Flexner.	B. Sonne.	E. histolytica.	Total.
Practitioners	10	58	1	269
M.O.H. (suspected cases)	6	12	—	134
M.O.H. (contacts) ...	2	3	—	110
Corporation Hospitals ...	7	41	—	570
	<u>25</u>	<u>114</u>	<u>1</u>	<u>1,083</u>
Total for 1937	74	65	—	995
Total for 1936 (excluding Paisley)	48	84	1	841

The 25 Flexner results were from 23 patients, and the 114 Sonne results from 104 patients. Seventeen specimens of faeces from 12 patients were examined for the organism of amoebic dysentery with 1 positive result, while 2 samples of milk, examined as a possible source of dysentery, proved negative.

No new localised epidemic of dysentery came to the notice of the laboratory during the year.

Food Poisoning.—As in former years samples of various kinds of foodstuffs were submitted for examination either as to their fitness for consumption or as being suspected sources of illness. They included such foods as apple cake, tinned salmon, ice cream, steak pie, corned mutton, condensed milk, and chicken jelly.

With reference to the illnesses that were investigated 55 specimens were submitted from 48 patients, the following table showing the materials examined and findings:—

	Food-poisoning organisms present.	Repeat positive.	Total samples examined.
Faeces	10	4	45
Urine	—	—	8
Blood serum (agglutination test) ...	—	—	1
Cultuae of Organism isolated elsewhere...	1	—	1
			<u>55</u>

The 17 samples of foodstuffs examined included 4 samples of milk submitted from the Maternity Hospital, the findings being negative.

Certain features of the various outbreaks were of interest:—

(1) Four members of a family were taken ill after eating stew and a *Salmonella bacillus* of the Aertrycke type was isolated from the fæces of one of them. This organism was present for more than a month after the onset of the illness. No specimen of the food thought to be responsible for the illness was available for investigation.

(2) A culture of an organism isolated from the fæces of a patient said to have been taken ill after eating a mutton pie was submitted to the laboratory by an outside authority for identification. It proved to be a *Salmonella bacillus* of the Newport type.

(3) Eight specimens of fæces from unrelated cases of intestinal illness were examined and found to contain various food-poisoning organisms. In none of these cases was any food suspected, the disturbances apparently bearing no relation to anything that had been eaten.

SHELLFISH.

Four samples of periwinkles were examined in the laboratory for the Health Department during the year, and entailed the investigation of 40 individual shellfish.

None of the samples showed evidence of undue contamination.

TUBERCULOSIS—HUMAN.

Specimens of sputum in suspected cases of pulmonary tuberculosis were examined as to the presence of the tubercle bacillus for medical practitioners and for the medical officers in charge of the tuberculosis dispensaries in the City. Medical practitioners submitted 2,114 specimens, while 2,688 were reported upon to the Health Department.

Other suspected material such as urine, cerebro-spinal and pleural fluids, pus from gland abscesses, fæces—301 specimens—were reported upon, largely by means of biological tests.

VENEREAL DISEASES.

The number of specimens examined in 1938 in connection with venereal diseases was 21,040, while the number of tests performed on them was 22,771. This total includes 9,445 specimens of blood

and 223 cerebro-spinal fluids subjected to the Wassermann Test, and 10,463 specimens of blood to the Kahn Precipitation Test. Many of these specimens as occasion required were examined by both methods and were thus reported. The Meinicke Clarification Test was also applied on 72 occasions as a control of the results so obtained, and has been found most useful. The total also includes 858 specimens of exudate examined for the presence of *Gonococcus*, 31 specimens of blood for the *Gonococcus* Complement Fixation Test, and 6 smears for *Treponema pallidum*. The Colloidal Gold Test was done on 14 cerebro-spinal fluids.

Wassermann Tests.—This test is used as an aid in the diagnosis of syphilis, and to assist in determining the results of treatment. The method employed is No. 1 Method M.R.C. (Modified), 1929, with certain modifications introduced by Dr. E. J. Wyler in 1932, and published in a report by the Ministry of Health (Reports on Public Health and Medical Subjects, No. 67). The sources of the specimens for this test were as follows:—

Public Health Department	...	...	...	4,612
Medical Practitioners of the City	...	...	...	1,230
Outside Local Authorities	...	...	...	1,223
Local Hospitals and Institutions	...	...	...	2,603
				<hr/> 9,668 <hr/>

The actual numbers for diagnosis and from patients undergoing treatment in the last four years, with the results of test, are of interest:—

Year.	For diagnosis.	Per cent. positive.	Under treatment.	Per cent. positive.	Total.
1938 ...	5,470	16.6	4,198	37.4	9,668
1937 ...	5,772	19.6	4,088	42.8	9,860
1936 ...	5,687	18.7	3,932	49.9	9,619
1935 ...	5,845	18.1	4,883	49.0	10,728

This table shows a marked drop in the positive percentage of cases for diagnosis, and the drop in positive percentage among cases undergoing treatment is very striking.

As a technical point of importance I would record again this year that the routine Wassermann technique (as above), in spite of its increased sensitiveness, has not rendered an undue number of sera anti-complementary as has been alleged in certain laboratories in England, the percentage of such results being only 0.2, the same figure as in 1937. This corresponds to 20 anti-complementary sera out of 9,668 specimens.

Kahn Test.—The great majority of the specimens subjected in the first instance to the Kahn Test were from cases which showed no clinical evidence of syphilis, the test being performed as a routine in connection with patients attending Ante-Natal Clinics, the Clinic for the Blind, the V.D. Dispensaries for the treatment of gonorrhœa only, and for other purposes. The results obtained with this test from 10,463 specimens submitted by the Health Department and performed as routine tests may be set out as follows:—

				Ante-natal Clinics.	Clinic for the Blind.	Gonorrhœa cases.	Hospitals &c.
Number	...	...	...	8,402	360	2,076	113
Per cent. positive	...	...	...	1.7	7.2	2.2	9.7
Per cent. positive in previous years :—							
1937	...	...	...	1.8	6.8	3.9	—
1936	...	...	...	2.1	8.1	3.4	13.0
1935	...	...	...	1.8	7.3	3.7	4.2
1934	...	...	...	2.7	10.5	5.8	3.2

These percentages are on the basis of positive results given in both Wassermann and Kahn Tests, the technique of the tests having been subject to no change in the above years.

The decline in positive percentage of ante-natal specimens is maintained even with the increase in number in 1938, the totals examined in previous years being 7,855 (in 1937), 5,839 (in 1936), 3,334 (in 1935), 3,664 (in 1934). It may be noted that the above two tests in combination are in frequent use on behalf of certain hospitals in relation to collection of blood sera from convalescent measles patients, and from prospective blood donors.

Gonococcus Complement Fixation Test.—This test is used in suspected latent cases of gonococcal infection, and was performed on 31 specimens of blood. Of these 9 gave positive reactions.

Examination for Treponema Pallidum (V.D.S.).—Microscopical examination was made of 6 specimens submitted, two of these being positive.

Examination for Gonococcus (V.D.G.).—Specimens numbering 858 were examined from cases other than ophthalmia neonatorum. Those for diagnosis gave a positive percentage of 16.2, while 13.5 is the corresponding figure for patients undergoing treatment.

The following table shows in detail the sources of the above materials, and the tests which were applied:—

	Wasser- mann Test.	Kahn Test.	V.D.G. micros.	V.D.S. micros.	Colloidal Gold Test.	Total.
<i>I. Public Health Department—</i>						
Blind Clinic, Tuberculosis Dispensary ...	83	360	—	—	—	443
V.D. Dispensaries (five) ...	3,966	2,076	12	—	—	6,054
Ante-natal Clinics (eleven) ...	447	8,402	247	—	—	9,096
Hospitals, Fever (six) ...	381	82	1	—	—	464
Hospitals, General (two) ...	—	31	1	—	—	32
	4,877	10,951	261	—	—	16,089
<i>II. Medical Practitioners—</i>						
(a) City of Glasgow ...	1,230	53	553	5	7	1,848
(b) Other Local Authorities ...	1,223	45	38	1	6	1,313
	2,453	98	591	6	13	3,161
<i>III. Local Institutions—</i>						
Lock Hospital ...	606	103	—	—	—	709
Ear, Nose & Throat Hospital ...	98	2	—	—	—	100
Cancer Hospital ...	27	1	—	—	—	28
Samaritan Hospital ...	55	1	—	—	—	56
Elder Hospital ...	12	2	6	—	—	20
Royal Hospital for Sick Children—						
(a) Hospital ...	261	5	—	—	—	266
(b) Dispensary ...	251	8	—	—	—	259
Department of Health for Scotland ...	18	—	—	—	—	18
Glasgow Eye Infirmary ...	1,251	155	—	—	—	1,406
Other Institutions ...	24	3	—	—	1	28
	2,603	280	6	—	1	2,890
Total ...	9,933	11,329	858	6	14	22,140

The above total does not include 31 *Gonococcus* Complement Fixation Tests for which 18 specimens were submitted from local sources and 13 from other Local Authorities.

OPHTHALMIA NEONATORUM.

Specimens of exudate from the eyes of 840 suspected cases of ophthalmia neonatorum were examined for the Child Welfare Centres, etc. Since repeated examinations are occasionally made to test the results of treatment, the number stated does not correspond to the actual number of cases.

Specimens from	Number.	Positive.
Medical Practitioners ...	7	3
Medical Officer of Health ...	833	30
	840	33

The positive results refer to the presence of the gonococcus.

The organisms observed microscopically in these specimens are described and reported, as far as possible, to the clinicians to assist in correlating different types of ophthalmia.

STREPTOCOCCAL INFECTIONS.

SCARLET FEVER, ETC.

The laboratory has not dealt with any outbreak of infectious disease due to these organisms this year. Search for them was confined for the most part to isolated sources, such as scarlet fever contacts, nurses commencing training in maternity work, cases of mastoiditis, otitis media, suspected puerperal fever, etc. One hundred and eighty-seven examinations were made with 33 positive results, none of which were puerperal cases.

The sources of specimens were as follows:—

	Health Dept.	Medical Practs.	Ear, Nose and Throat Hosp.	Outside Authorities
Scarlet Fever, &c. ...	61	32	20	19
Puerperal Fever ...	14	38	—	3
	75	70	20	22
	==	==	==	==

ANTHRAX.

The following specimens were subjected to biological examination for the presence of the Anthrax bacillus during the year:—

(a) Two samples of dust from the floor of a factory, with negative results;

(b) Four samples of salted ox-hides, with negative results;

(c) One swab from a suspicious pustule on the wrist of a meat-carrier. No anthrax bacilli were found, but *Staphylococcus aureus*, a common cause of skin pustules, was isolated.

(d) In connection with the development of malignant pustules, one on the elbow and one on the shoulder respectively, of two workers, twelve samples of artificial manures, one piece of sacking, one sample of dust collected from empty bags, and three rats (*Mus decumanus*) were examined. Anthrax bacilli were not found in any of the materials submitted, and the rats also proved negative for infection with these organisms. Eighteen biological experiments were made in investigating these cases.

PLAGUE.

Since this disease is usually acquired from the bite of a rat flea which has fed on a plague-infected rat, examination of rats from ships and from the harbour form a routine part of laboratory work. During the year 507 rats—276 males, 231 females—were examined for evidence of this infection, with negative results. The species of rats examined were *Mus decumanus* (167), *Mus rattus* (170), *Mus alexandrinus* (170).

MILK SUPPLY.

I. IN RELATION TO BOVINE TUBERCULOSIS.

All reports as to whether samples of milk contain tubercle bacilli are based on the results of biological tests. The total number of samples for 1938 is 973 as compared with 925 in 1937. The following are the results:—

	Samples.	Tuberculous	% Tuberculous
1. <i>Milk from Town Cows</i> — Submitted by Veterinary Surgeon	1	1	—
2. <i>City Milk Supply</i> — Obtained by milk and dairy inspectors at consignees' premises—			
(a) Undesignated milks ...	417	23	5.5
(b) Designated milks, sold as such	48	—	—
3. <i>T.T. Pasteurised Milk</i> — Supplied through Child Welfare Centres	52	—	—
4. <i>Pasteurised Milk</i> — Supplied to Schools	123	—	—
5. <i>Hospital Milk Supply</i> — These are T.T. and Pasteurised Milks	221	—	—
6. <i>Other Local Authorities</i>	111	4	3.6

II. IN RELATION TO BACTERIAL CONTENT.

City Milks.—Milks coming into the City are examined for the number of bacteria they contain per millilitre, and in relation to the presence of coliform bacilli. They are sampled at consignees' premises. During the year 415 samples were estimated in this way, and the results as to bacterial count may be compared with those of the previous year, as follows:—

	Number examined.	Samples below maximum of Certified Milk (30,000 per ml.).	Samples below maximum of Standard Milk (200,000 per ml.).	Samples above 200,000 per ml.
1938 ...	415	126 (31%)	176 (42%)	113 (27%)
1937 ...	402	147 (36.5%)	164 (40.8%)	91 (22.6%)

The actual average of bacterial counts of the above results are presented in the following table as indicating degree of purity of production:—

Total number of samples examined—415.

Maximum counts at 37°C. of designated milks (given as a basis for comparison).	Average counts at 37°C. and number of samples involved.	
Below 30,000 per ml. (Certified)	14,800 per ml. for 126 samples	=30.3%
Below 200,000 per ml. (Standard)	69,350 per ml. for 176 samples	=42.4%
Above 200,000 per ml.	} 424,300 per ml. for 83 samples Over a million per ml. for 30 samples	=20%
		=7.2%

Thus 72.7 per cent of the samples are of Certified or Standard grade as to count, as compared with 77.3 per cent. in 1937, and 67.8 per cent. in 1936.

Child Welfare Milk.—52 samples of T.T. (Pasteurised) milk supplied through Child Welfare Centres, were examined at weekly intervals. The average count was 8,200 per ml. as compared with 15,200 per ml. in 1937 and 14,180 per ml. in 1936.

School Milk.—120 samples of milk supplied to schools were examined at fortnightly intervals. The average count was 28,400 per ml.

Hospital Milk.—The City hospitals are supplied with milk designated as Tuberculin Tested and Pasteurised. Estimations are made fortnightly for thirteen hospitals. The average counts fell well within the maximum required for the respective grades in all but 33 of the 216 samples examined.

Designated Milk.—In addition to the samples already dealt with, 430 samples of graded milks were examined for the Health Department. Of these, 364 were found to give less than the maximum count allowed for their grade, while 66 exceeded it. The details are subjoined:—

	Samples.	Within maximum count.	Over maximum count.
Certified ...	95	75	20
Pasteurised ...	167	137	30
Standard ...	10	8	2
Tuberculin Tested	135	121	14
T.T. (Pasteurised)	23	23	—
	<hr/> 430	<hr/> 364	<hr/> 66 (15.3%)
1937 ...	<hr/> 424	<hr/> 361	<hr/> 63 (14.8%)

Samples of Certified milk were examined at fortnightly intervals for the Royal Hospital for Sick Children. Out of 14 samples submitted 8 were up to standard.

The relative maximum bacterial counts for the grades are appended:—Certified, Pasteurised and T.T. (Pasteurised) each 30,000 per ml., Tuberculin Tested and Standard each 200,000 per ml.

WATER EXAMINATIONS.

City Water Supply.—Monthly estimations of bacterial content of samples from Craigmaddie, Mugdock and Gorbals Reservoirs and from the laboratory tap were carried out as in previous years. 74 samples were examined, and the content found to be fairly constant. The bacterial counts were made on agar medium only:—

		Number of samples.	Average count per ml. at 37°C.	Average count per ml. at 22°C.	Samples with streptococci in 30 ml.	
					Faecal.	Non-faecal.
Loch Katrine	...	48	7	25	—	4
Gorbals Reservoir		26	56	287	—	4

In none of these samples was typical *B. coli* found in quantities less than 50 ml. During the year there was no unusual departure from the standards of purity associated with these water supplies.

Public Baths Water.—112 samples from 22 swimming ponds were examined and reported to the Baths Department during the year, to gain information upon the effects of filtration and chemical treatment. The strains of streptococci which were isolated from 3 samples were tested for hæmolytic properties, in each case with negative result. This is in conformity with the experience of other cities.

HISTOLOGICAL EXAMINATION OF TISSUES.

Specimens of tissues were submitted for report upon changes of structure as observed by microscopical examination of thin sections. Some were of the nature of tumours, while others were for evidence of tuberculosis or other change. Eight specimens were reported upon.

EXAMINATION OF DISINFECTANTS.

Samples of disinfectants were submitted by the Health Department for the determination of their germicidal power. The method employed was the "British Standard Technique for Determining the Rideal-Walker Coefficient of Disinfectants" issued by the British Standards Institution. Two samples were thus estimated.

An investigation which involved ten biological experiments was carried out on behalf of the Central Drug Store in relation to two samples of disinfectant submitted by them. The object was to determine the bactericidal power of these substances against tubercle bacilli as compared with Lysol.

BIOLOGICAL LABORATORY.

Some of the commoner infections requiring biological tests were mentioned at the beginning of this Report. In 1938 these tests numbered 1,429.

SUMMARY OF EXAMINATIONS FOR THE YEAR, 1938.

The examinations performed in the bacteriological laboratory during 1938 numbered 46,080 as compared with 44,759 in the previous year. The sources of materials submitted were as follows:—

	Medical Practs.	Health Dept.	Other Local Auths.
Tuberculosis (Human)—			
Microscopical Examinations—			
Sputum	2,014	2,688	100
Urine	24	31	3
Pus	6	55	3
Pleural effusion	5	6	2
Faeces	3	7	2
Cerebro-spinal fluid	1	—	6
Fluid from knee	1	—	—
Caseous material	—	1	—
Dust	—	2	—
Biological Test	30	106	7
Tuberculosis (Bovine)—			
Milk—			
Microscopical Examination	—	1	—
Biological Test—			
Town Cows	—	1	—
City Milk Supply	—	465	—
Child Welfare Milk Supply	—	52	—
School Milk Supply	—	123	—
Hospital Milk Supply	—	221	—
Miscellaneous Sources	—	—	111
Typhoid and Paratyphoid Fever—			
Blood (agglutination)	82	36	10
Urine, faeces, blood (cultures)	144	1,114	154
Bile	—	1	—
Dysentery—			
Faeces	188	810	85
Milk	2	—	—
Blood	—	—	1
Diphtheria—			
Swabs from suspected cases	8,075	1,538	495
Swabs from contacts	—	1,090	—
Virulence Tests	47	149	76
Pre-admission swabs	32	131	—

	Medical Practs.	Health Dept.	Other Local Auths.
Vincent's Angina—			
Throat swabs from suspected cases ...	34	2	3
Meningitis—			
Cerebro-spinal fluid	6	—	16
Post-nasal swabs	1	5	2
Scarlet Fever, &c.—			
Cultural Tests for haemolytic streptococci	90	75	22
Ophthalmia neonatorum	7	833	—
Venereal Diseases—			
Wassermann Test	3,833	4,877	1,223
Kahn Test—Ante-natal, &c.	333	10,951	45
Gonococcus Complement Fixation Test	8	10	13
Colloidal Gold Test	8	—	6
Gonococcal Infections other than			
Ophthalmia neonatorum	559	261	38
Treponema pallidum	5	—	1
Anthrax—			
Ox-hides	—	4	—
Artificial manures	—	14	—
Rats	—	3	—
Dust	—	2	—
Material from patient	—	—	1
Plague—			
Examination of Rats from Ships, Docks and City	—	507	—
Infective Jaundice—			
Material from patients	—	7	—
Malaria—			
Blood	2	1	2
Bacterial Diagnosis (various diseases)—			
Urine 81 ; faeces 23 ; fluid 13 ; swabs 16 ; pus 26 ; sputum 2 ; milk 1 ; miscellaneous 14.	122	35	19
Food-poisoning Organisms—			
Examination of foodstuffs	—	15	2
Material from patients	7	47	1
Water—Ships, Households, &c.—			
Analyses	—	30	—
Milk (Bacterial Content)—			
Under Milk (Special Designations) Order	—	430	—
City Milk Supply	—	415	—
Child Welfare Supply	—	52	—
School Milk Supply	—	120	—
Hospital Milk Supply	—	216	—
Miscellaneous Sources	14	26	25
Ice Cream	—	35	—

	Medical Practs.	Health Dept.	Other Local Auths.
Blood—			
Cytological Examination by Smears ...	21	1	1
Occult Blood—			
Fæces	5	—	—
Undulant Fever—			
Blood	11	5	3
Histological Examination—			
Tumours and Tissues for Malignancy, &c.	3	1	4
Parasites—			
Swabs, skin, &c.	2	—	—
Chemical Examination—			
Urine	—	20	—
Typhus—			
Serum Test (Weil-Felix)	—	—	1
Vaccine	3	—	1
Identification of Insect	—	—	1
Shellfish—			
Periwinkles (samples 4), Examinations	—	40	—
Disinfectants, for Coefficient	—	4	—
Mastitis—			
Milk	—	9	—
	<u>15,728</u>	<u>27,681</u>	<u>2,485</u>
		45,894	
Water Department—			
Tap Water	24		
Reservoirs	50		
	—	74	
Baths Department—			
Water from Swimming Ponds		112	
		<u>46,080</u>	

W. R. WISEMAN.

SECTION X.

FOOD.

FOOD INFECTIONS, POISONING, Etc.

Several cases of illness associated with articles of food were reported during the year and the following notes made :—

After a meal of tinned salmon four members of a family became ill with abdominal pain, sickness, and diarrhoea. All the salmon was consumed and no specimens were available. The tin had been thrown out and was retrieved from a dustbin for examination. No food poisoning organisms were discovered.

A child of two years of age became suddenly and sharply ill with vomiting, diarrhoea, and abdominal pain and was removed to hospital. The father and another child became ill with similar symptoms, the father so acutely as to necessitate removal to hospital. These three persons, along with the mother, had had some ice cream, but the mother remained unaffected. No specimens were available but examination of the faeces of the two patients in hospital proved negative. No other cases of illness were reported in relation to the ice cream supplied by the vendor from whom this family obtained their supply.

Five members of a household became ill within three to seven hours of eating a meat pie. This had been purchased the previous day and re-heated. Another member of the family ate a piece of the pie next morning and became ill afterwards while at work. The usual symptoms of vomiting, colic, and diarrhoea were present. No organisms were detected on bacteriological examination.

Suspected food poisoning was reported by a medical practitioner in a family of five persons. All but one became ill three-and-a-half hours after a dinner of stew. All recovered on the following day, only to relapse again on the next. Two of the patients were febrile, with rapid pulse, and some prostration and were removed to hospital as suspected dysentery cases. No positive results were obtained on examination and they were eventually dismissed as cases of acute gastro enteritis. From one of the other patients remaining at home a salmonella organism was isolated. Unfortunately no specimen of the stew remained for examination.

The Press reported a case of food poisoning in a family of four persons. After drinking tea sweetened with condensed milk they had experienced a burning sensation in the mouth, followed by sickness, diarrhoea, and abdominal colic. All but one of the family were removed and only one detained in hospital overnight. Examination of specimens of the tea and of the condensed milk, both chemical and bacteriological, was negative.

A doctor reported suspected food poisoning in a family of eleven persons following a meal of meat pie, vegetables, &c. Only three of them had not been affected and they had not taken any of the pie. The usual symptoms of colic and diarrhoea were present, but sickness was present in one instance only. The pie was made of frozen imported meat which the mother had bought the previous day, cut up and put in an ashet and then taken to a nearby bakehouse to be covered and baked. The crust was removed and the meat heated in the ashet over the fire on the following day. It then looked and tasted quite good. Examination of faeces was negative, and while no food poisoning organisms were isolated in the specimen of pie submitted, there was much contamination with bacteria of coliform type and some streptococci.

A middle aged woman complained of colic and diarrhoea during the week following her consumption of a brand of chicken jelly. She was not febrile and stools were negative for pathogenic organisms. The jelly was contaminated bacteriologically but not with food poisoning organisms. It is not known where the contamination was effected, but the jar of jelly was the last of a chemist's stock and had been on his shelves for a considerable time.

AERATED WATERS.

Instances of bottles of aerated waters contaminated by disinfectants continue to be reported. Two cases of sickness following the drinking of aerated waters so contaminated were investigated.

In the first the contents of the bottle had a distinct odour of disinfectant and left a burning and lasting taste in the mouth. On examination the liquid was found to contain 125 parts per million of Phenol, a constituent of coal tar disinfectant. This represents a quantity of 0.54 grains in a full bottle. The results were communicated to the manufacturers.

In the second instance a bottle was received for examination where the proportion of Phenol present was estimated at 22 parts per million. Mineral poisons were absent. This small quantity of Phenol could have no toxic properties.

The following notes are submitted by the senior food inspector :—

SUMMARY OF OPERATIONS UNDER THE FOOD AND DRUGS
(ADULTERATION) ACT ; THE MILK AND DAIRIES ACTS ;
AND ALLIED ACTS AND ORDERS FOR THE YEAR ENDING
31ST DECEMBER, 1938.

The Food and Drugs (Adulteration) Act, 1928.—During the year 194 different articles of food and drugs, as detailed at the end of this section of the report, were examined. In addition, 1,333 formal and 3,624 informal, totalling 4,957 samples, were obtained and submitted for analysis. 74 (5.55 per cent.) of the formal and 97 (2.68 per cent.) of the informal samples were reported as being adulterated. Where adulteration was such as to warrant prosecution, complaints were prepared and submitted to the Fiscal.

This year 52 offenders were dealt with, and convictions were obtained in 43 instances. One warranty defence was sustained and one prosecution for giving a false warranty in writing was unsuccessful. Five cases were deserted for definite and sufficient reasons ; one case was dismissed, and another found not proven. Of those dealt with, seven were second offences and one a fourth offence. Penalties amounting to £102 15s. were imposed. Under Part II of the Act, two cases were taken for failure to attach the statutory label to margarine when exposed for sale by retail and for the sale of margarine by retail in other than a statutory wrapper. Convictions were obtained, and each offender was fined £2. In other instances of minor default warnings and advice were given and attended to.

ABSTRACT OF TOTAL SAMPLES EXAMINED DURING 1938.

Article.	Informal.		Statutory.		Percentage adulterated.		Percentage of Samples taken in each Group to Total.	
	Taken.	Non-Gen.	Taken.	Non-Gen.	Infor. %	Stat. %	Infor. %	Stat. %
Milk and Cream	2,253	54	811	27	2.40	3.33	62.17	60.84
Milk Products (Butter, Cheese, &c.)	151	1	43	1	0.66	2.33	4.17	3.22
Meats and Meat Food Products	71	6	151	39	8.45	25.83	1.96	11.33
Cereals, &c.	104	—	58	—	—	—	2.87	4.35
Spirituous Liquors	110	21	10	1	19.09	10.00	3.03	0.75
Drugs	299	12	73	2	4.01	2.74	8.25	5.48
Flavourings and Condiments	93	—	41	—	—	—	2.57	3.08
Miscellaneous Foods, &c.	543	3	146	4	0.55	2.74	14.98	10.95
Totals	3,624	97	1,333	74	2.68	5.55	100.00	100.00

ABSTRACT OF INFORMAL AND STATUTORY SAMPLES OF SWEET MILK EXAMINED DURING 1938.

Informal.				Month.	Statutory.			
No. examined.	No. presumed Non-Gen.	Average percentage Composition.			No. examined.	No. presumed Non-Gen.	Average percentage Composition.	
		Fat. %	Non-Fat. %				Fat. %	Non-Fat. %
189	1	3.62	8.83	January	70	3	3.58	8.74
191	9	3.52	8.79	February	72	3	3.52	8.73
203	7	3.57	8.82	March	72	2	3.58	8.81
187	4	3.61	8.80	April	67	1	3.55	8.72
192	5	3.62	8.89	May	69	1	3.54	8.83
186	2	3.63	8.90	June	71	4	3.54	8.93
124	—	3.65	8.80	July	51	—	3.55	8.81
161	2	3.70	8.78	August	58	1	3.68	8.80
205	6	3.72	8.81	September	67	3	3.73	8.77
187	4	3.98	8.79	October	68	1	3.81	8.81
164	9	3.73	8.77	November	69	3	3.78	8.68
189	5	3.63	8.81	December	68	5	3.62	8.77

Total No. examined.	Percentage presumed Non-Gen.	Average percentage for year.		Total No. examined.	Percentage presumed Non-Gen.	Average percentage for year.	
		Fat.	Non-Fat.			Fat.	Non-Fat.
2,178	2.48	3.66	8.82	802	3.37	3.62	8.78

Artificial Cream Act, 1929.—There are no manufacturers of, nor dealers in, artificial cream registered with the Food and Drugs Authority. During the year application was made by a City firm to have premises registered for the manufacture of artificial cream and for permission to use a name which incorporated the word “cream.” It was found after enquiry that the substance to be manufactured was not artificial cream, as described in the Act. Registration, therefore, could not be granted. The applicant was informed that “artificial cream” was the only name that could be applied to a substance prepared in conformity with the Act, and that no other compound word incorporating the word “cream” was permissible.

The Public Health (Preservatives, &c., in Food) Regulations.—With certain exceptions the use of preservatives in food is strictly prohibited; also various prescribed metallic, vegetable, and coal tar colouring matters may not be added to articles of food. Of the samples examined in the course of the year, prohibited and excess preservative was found only in butcher’s mince and sausages. No article of food was found to contain any prohibited colouring matter. For contraventions of the regulations 23 cases were dealt with in Court, compared with 35 last year. Articles

in which preservatives were found, along with their nature and amount, are shown in the following table :—

ABSTRACT OF ARTICLES OF FOOD IN WHICH PRESERVATIVES, &c., WERE FOUND, AND THE NATURE AND AMOUNT DURING YEAR ENDING 31ST DECEMBER, 1938.

Nature of Article.	Number examined.	Number in which Preservatives, &c., were found.	Nature of Preservative, &c.	Parts per Million.	
				Highest.	Lowest.
Apples (Dried) ...	1	1	Sulphur Dioxide	275	
Apricots (Dried) ...	13	12	" "	825	294
Beer ...	9	8	" "	41·6	9·6
Chicken and Ham Roll	1	1	" "	Trace	
Cider ...	4	3	" "	43	18
Cornflour ...	10	3	" "	42	19
Cream Powder ...	1	1	" "	60·8	
Custard Pudding ...	1	1	" "	12	
Custard Powder ...	17	9	" "	38	12
Fish Cakes ...	3	1	" "	19	
Fruit Salad (Dried) ...	9	9	" "	915	160
Gelatine ...	6	6	" "	307	38
Jaffa Juice ...	1	1	" "	204	
Lemon Peel ...	7	1	" "	25	
Macaroni ...	14	1	" "	12	
Mince ...	138	70	" "	1,680	Trace
Mineral Water (Sweetened)	14	3	" "	51	19
Pears (Dried) ...	4	2	" "	172	160
Pease Meal ...	10	1	" "	Trace	
Preserves ...	29	12	" "	64	6
Salmon Roll ...	2	1	" "	Trace	
Sauce ...	17	1	Benzoic Acid	56	
Sausages ...	33	31	Sulphur Dioxide	853	16
Sausage Meat ...	11	11	" "	339	25
Stout ...	2	1	" "	6·4	
Sugar ...	31	1	" "	12	
Sultanas ...	14	4	" "	358	64
Table Jelly ...	17	10	" "	102	12
Wine (Alcoholic) ...	8	5	" "	141	13
" (Non-Alcoholic) ...	9	2	" "	192	44
" (Non-Alcoholic) ...		6	Benzoic Acid	446	190
Totals ...	436	219			

Milk (Special Designations) Orders (Scotland), 1936 to 1938.—From 1st October, 1938, producers in Scotland have been paid premiums for milk produced under conditions as laid down in the Milk Special Designations Orders. It is expected that these quality premiums will encourage farmers to clean up their herds and ultimately lead to the complete eradication of tuberculosis among dairy cows. Numerous applications for licences permitting the use of special designations have been received and granted. The chief conditions required are that the byres and methods should fully comply with the dairy bye-laws and that steam sterilization of all vessels and appliances should be carried out.

Cooling of the different grades, except Standard, to certain temperatures is also necessary. Score cards are kept on which, at regular intervals, marks are given for the general condition of the premises and the observance of the Orders. A copy of each score card has been passed to the Department of Health, and each licence granted has been reported to the same Department, to the Ministry of Agriculture's Veterinary Inspector, and also to the Scottish Milk Marketing Board, who then pays the premiums from the date of the licence.

The following table shows the different grades of designated milk dealt in within the City, along with the average daily quantities and also the number of producers, dealers, bottling and pasteurising establishments licensed in terms of the Orders at the end of the year. Two pasteurising establishments are equipped with duplicate plants, one of which in each case is specially reserved for the pasteurisation of Tuberculin Tested milk. The average daily sales have increased from last year by the following amounts—Certified, 155 gallons; Tuberculin Tested, 712 gallons; Pasteurised, 4,551 gallons. "Standard Milk" is again being dealt in after a lapse in the past year. No milk of this quality, however, is being sold to the public under the designation Standard, this grade being produced under the required conditions only for the purpose of obtaining the quality premiums. The figures of the past two years are included for comparison.

Certified—						1938	1937	1936
Producers	...	...	...	...	...	—	—	—
Dealers	...	...	...	...	...	271	241	106
Total Average Daily Sales (Gallons)						406	251	339
Tuberculin Tested—								
Producers	...	...	...	...	...	4	1	—
Bottling Establishments	...	...	...	...	...	7	6	4
Dealers	...	...	...	...	...	445	399	289
Total Average Daily Sales (Gallons)						†2,785	†2,073	1,100
Standard—								
Producers	...	...	...	...	...	10	—	—
Bottling Establishments	...	...	...	...	...	—	—	—
Dealers	...	...	...	...	...	—	—	9
Total Average Daily Sales (Gallons)						658	—	43
Pasteurised—								
Pasteurising Establishments	...	...	...	...	...	6	6	6
Dealers	..	..	...	...	...	261	233	121
Total Average Daily Sales (Gallons)						15,125	10,574	*5,600
Includes *300 gallons Tuberculin Tested (Pasteurised).								
,, †1,174 ,, Tuberculin Tested (Pasteurised).								
,, †1,083 ,, Tuberculin Tested (Pasteurised).								

Note.—The quantities shown in the table do not include supplies to institutions or milk of pasteurised standard not sold under that designation.

The number of samples of designated milk taken during the year was 354. These were submitted to the City Bacteriologist and the City Analyst for examination as to their conformity with the Orders. The following table shows the results :

RESULTS OF EXAMINATIONS OF DESIGNATED MILKS.

Bacteriological Examination		CERTIFIED.		TUBERCULIN TESTED		TUBERCULIN TESTED (PASTEURISED)		STANDARD.		PASTEURISED. (a) Not more than 30,000 bacteria per ml. (b) No coliform in 1/100 ml. (c) Not less than 3.5% butter fat (1/1/38 to 30/9/38) ; 3% butter fat (1/10/38 to 31/12/38)
		(a) Not more than 30,000 bacteria per ml. (b) No coliforms in 1/10 ml. (c) Not less than 3.5% butter fat (1/1/38 to 30/9/38) ; 3% butter fat (1/10/38 to 31/12/38)	(a) Not more than 200,000 bacteria per ml. (b) No coliforms in 1/100 ml. (c) Not less than 3.5% butter fat (1/1/38 to 30/9/38) ; 3% butter fat (1/10/38 to 31/12/38)	(a) Not more than 200,000 bacteria per ml. (b) No coliforms in 1/100 ml. (c) Not less than 3.5% butter fat (1/1/38 to 30/9/38) ; 3% butter fat (1/10/38 to 31/12/38)	(a) Not more than 200,000 bacteria per ml. (b) No coliforms in 1/100 ml. (c) Not less than 3.5% butter fat (1/1/38 to 30/9/38) ; 3% butter fat (1/10/38 to 31/12/38)	(a) Not more than 200,000 bacteria per ml. (b) No coliforms in 1/100 ml. (c) Not less than 3.5% butter fat (1/1/38 to 30/9/38) ; 3% butter fat (1/10/38 to 31/12/38)	(a) Not more than 200,000 bacteria per ml. (b) No coliforms in 1/100 ml. (c) Not less than 3.5% butter fat (1/1/38 to 30/9/38) ; 3% butter fat (1/10/38 to 31/12/38)	(a) Not more than 200,000 bacteria per ml. (b) No coliforms in 1/100 ml. (c) Not less than 3.5% butter fat (1/1/38 to 30/9/38) ; 3% butter fat (1/10/38 to 31/12/38)	(a) Not more than 200,000 bacteria per ml. (b) No coliforms in 1/100 ml. (c) Not less than 3.5% butter fat (1/1/38 to 30/9/38) ; 3% butter fat (1/10/38 to 31/12/38)	(a) Not more than 200,000 bacteria per ml. (b) No coliforms in 1/100 ml. (c) Not less than 3.5% butter fat (1/1/38 to 30/9/38) ; 3% butter fat (1/10/38 to 31/12/38)
Number examined...		94	137	23	10	90	82	90	82	90
Number conforming to count and coliform requirements.		63	110	20	8	82	82	82	82	82
Number exceeding count only.		8	7	—	2	8	—	8	—	8
Number exceeding count and having coliforms present		13	7	—	—	3*	—	3*	—	3*
Number conforming to count but having coliforms present		10	13	3	—	13*	—	13*	—	13*
Agar Count { Lowest ... Highest ...		100	500	50	15 000	150	15 000	150	15 000	150
per ml. { ...		630,000	1,000,000 +	27,600	592,000	1,000,000 +	592,000	1,000,000 +	592,000	1,000,000 +
Presence of { ...		71	117	20	—	74*	—	74*	—	74*
Coliforms { + ...		23	20	3	—	16*	—	16*	—	16*
Fat { Minimum 3.5% or over. Number below 3.5%.		69	82	17	—	—	—	—	—	—
Number 3% or over. { Number 3% or over. (1/10/38 to 31/12/38) 3 %		10	23	2	—	—	—	—	—	—
Number 3% or over. { Number 3% or over. (1/10/38 to 31/12/38) 3 %		15	32	4	10	—	10	—	10	—
Average Butter Fat Content		3.98	3.83	3.71	3.84	3.66	3.84	3.66	3.84	3.66

* As no coliform requirement, only included for reference.

It will be seen from this table that 79.94 per cent. of the samples examined were in conformity with the standards required, as compared with 81 per cent. last year. This year 45 samples, including Certified, Tuberculin Tested, and Standard milk, taken at intervals from the different supplies delivered to City dairies, were tested for bacillus tuberculosis. All proved negative. Regarding milk fat, 81.64 per cent. of the samples were in conformity, which is a decrease from last year's figure, which was 94.7 per cent. It is to be regretted that from 1st October of this year the standard of milk fat has been reduced from 3.5 per cent. to the ordinary milk presumptive standard of 3 per cent. This can only be regarded as a retrograde step.

Supplies of Designated Milk to Corporation Hospitals, &c.—All Corporation hospitals and institutions receive designated milk supplied by the Corporation farms, by various producers, and by contractors. The approximate average amount delivered daily equals 2,090 gallons. The amount from cows which have passed the tuberculin test is 1,519 gallons, and that of pasteurised quality is 571 gallons.

Of 178 samples of tuberculin tested milk examined, 151 were found to conform with the requirements, showing a percentage of 85 as compared with 82 in the previous year. Thirty-eight samples of pasteurised milk were examined, and 22 of these were found satisfactory in respect of bacterial count, while 16 were found to have counts above the prescribed limit. 216 samples of tuberculin tested and of pasteurised milk were biologically examined for the presence of tubercle, and none was found positive.

In addition, 532 samples were submitted to chemical examination, and of these 513 were in conformity, showing 96 against 95 per cent. in 1937. The average fat content of the samples was 3.84 per cent.

Examination of Ordinary Market Milk for the Presence of Tubercle.—The milk supply of the City is drawn mostly from the neighbouring counties and arrives in the City by rail and motor transport. The food inspectors await the arrival of the milk at City dairies and draw samples regularly throughout the year, the different dairies being visited in rotation. These samples are submitted for biological examination for the presence of tubercle. When an infected sample is found, the Medical Officer of Health of the district where the milk was produced is informed immediately and an intimation is sent to the Milk Marketing Board. The Ministry's Veterinary Inspector visits the herd at once, and any infected animal found is removed and slaughtered. Further samples

are then taken, while meantime the milk from the remaining animals is pasteurised until the herd is cleared of any suspicion of infection. During the year, 312 samples were examined, 16 of which were found to be tuberculous. This shows a percentage of 5·13, as against a percentage of 8·18 in the previous year. This decrease may be regarded as very satisfactory.

The following table shows the figures for the year, along with those of the two years previous, and shows also the district in which the milk was produced :—

SAMPLES OF PRODUCERS' SUPPLIES EXAMINED FOR THE PRESENCE OF TUBERCLE.

County.	1938		1937		1936	
	No. Examined	No. Tuberculous.	No. Examined.	No. Tuberculous.	No. Examined.	No. Tuberculous.
Argyll...	—	—	—	—	2	—
Ayr ...	103	4	178	14	51	7
Bute ...	—	—	14	1	25	1
Clackmannan	—	—	—	—	2	2
Dunbarton ...	10	2	11	1	19	2
Glasgow ...	10	1	4	—	3	—
Lanark ...	111	6	77	9	162	14
Renfrew ...	67	3	31	1	24	1
Stirling ...	11	—	3	—	27	1
Totals ...	312	16	318	26	315	28

Bacterial Counts of Ordinary Market Milk supplied to the City.—In addition to being examined for tubercle, the foregoing samples were examined for bacterial content and for coliform bacillus. Particulars of these tests are given in the table following :—

BACTERIAL COUNTS OF ORDINARY MARKET MILK SUPPLIED TO THE CITY.

Number examined.	Average number of Bacteria per ml.					Coliforms in 1/100 ml. (2 days).	
	Under 100,000	100,000 to 200,000	200,000 to 500,000	500,000 to 1,000,000	Over 1,000,000	—	+
312	178	36	43	27	27	199	113

The number of bacteria in one sample could not be counted owing to spreading organisms of a certain group being present.

Viewed from the number of bacteria found, 90 (50·56 per cent.) of the 178 samples with less than 100,000 bacteria per millilitre were of "Certified" quality, compared with 111 (56·06 per cent.) of the 198 with less than 100,000 in 1937. 214 (68·59 per cent.) of the total number of samples taken were equal to "Standard" quality, compared with

235 (73·73 per cent.) in 1937. Coliforms were absent in 199 samples (63·7 per cent.), compared with 214 (67·3 per cent.) in 1937. These samples were also submitted for chemical analysis, and while 20 were found to be low in non-fatty solids none was found deficient in milk fat. The average fat and non-fat content of the samples was 3·71 and 8·76 per cent. respectively.

Raw Milk as Retailed in the City.—Examination was again continued this year of raw milk as sold in retail dairies and from vehicles, some of the latter coming from outside the City. The quantity of this milk sold ranges around 10 per cent. of the total City supply, and it is sold more commonly in that part of the City south of the Clyde than in the part to the north. Dealers are usually supplied direct from the farm by producers who sometimes, in addition, retail their own milk. 104 samples were submitted to the City Bacteriologist, and one of these (0·96 per cent.) was found positive to tubercle bacilli, compared with 4 out of 84 samples (4·76 per cent.) last year. The infected milk supply was stopped until all fear of infection had passed. All the samples were examined also for number of bacteria and presence of coliforms. The results are shown in the following table:—

BACTERIAL COUNTS OF RAW (UNTREATED) MILK AS RETAILED IN THE CITY.

Number Examined.	Average Number of Bacteria per ml.						Coliforms in 1/100 ml. (2 days).	
	Under 30,000	30,000 to 100,000	100,000 to 200,000	200,000 to 500,000	500,000 to 1,000,000	Over 1,000,000	—	+
104	34	38	16	11	2	3	75	29

Child Welfare Milk.—Careful supervision is exercised over this milk, which is supplied free where recommended to mothers and to children. The milk, of tuberculin tested quality pasteurised, is delivered at the homes of the recipients each day by a dairy company in the City who have an approved pasteurising plant. During the year, 52 samples were obtained for biological and bacterial examination. None was found to be positive to tubercle bacilli. The samples showed an average bacterial content of 8,188 per millilitre, while 4 of the number failed to comply with the standards laid down in the Milk Special Designations Orders. 104 samples were chemically examined, and gave an average fat and non-fat content of 3·70 and 8·73 per cent. respectively. Two samples of dried milk drawn from the supply were found to be in conformity with the Dried Milk Regulations.

Milk to School Children.—Supplies of milk, chiefly of tuberculin tested quality pasteurised, were continued this year to City schools. No complaint regarding this milk has been received. Each contractor engaged with the supply has been granted a Pasteuriser's Licence in terms of the Milk Special Designations Orders. Pasteurisation of all milk supplied to school children in the City would appear, in the light of experience gained in past years, to be well justified. Sampling was undertaken at regular intervals, and the number of samples examined, along with the average bacterial content and the chemical analysis, are shown in the following table. An additional table shows the average daily quantities supplied computed on a monthly basis. The number of school days in each month is also shown.

SCHOOL MILK, 1938.

No. examined.	No. exceeding Count.	Bacteria per millilitre.			No. Tuberculous.	Fat and Non-Fat Solids.		
		Highest.	Lowest	Average.		Highest Sample.	Lowest Sample.	Average of all Samples
120	20	780,000	200	28,528	None	Fat Solids 4.60	3.10	3.68
						Non-Fat Solids 8.72	8.82	8.84

AVERAGE DAILY QUANTITIES SUPPLIED.

Month.	Gallons.	School Days.	Month.	Gallons.	School Days.
January ...	3,877.6	17	July ...	—	—
February ...	4,182.71	20	August and ...	4,397.03	23
March ...	4,406.35	20	September ...		
April ...	4,469.77	19	October ...	4,282.14	19
May ...	4,429.9	18	November ...	4,391.41	19
June ...	4,273.1	24	December ...	4,129.06	22

Daily average throughout the year=4,287.57 gallons.

The Public Health (Condensed Milk) and the Public Health (Dried Milk) Regulations (Scotland), 1931.—There is a large amount of condensed full cream milk and a larger amount of condensed skimmed milk sold in the City. This condensed milk is prepared both in this country and abroad. It is required that each tin should bear a label stating the equivalent of the contents to a stated amount of liquid whole or skimmed milk. To ensure that this is being complied with a representative number of tins, 36 altogether, were submitted for analysis. All the samples were found to conform to the standards required, and the wording and form of notice on the labels were in order. In addition, 6 tins of dried milk were examined, all of which complied with the regulations.

Agriculture Produce (Grading and Marking) (Eggs) (Scotland) Regulations, 1929.—All premises registered in terms of these regulations were inspected at regular intervals. One new registration was made during the year. A copy of the entry was forwarded to the Department of Agriculture, and a certificate of registration was issued to the firm concerned. The number of cold stores now on the register is six. (There is no gas store in the City used for the storage of eggs.) Before removing eggs from these stores, dealers are reluctant to have the shells stamped "cold stored," "chilled," or "sterilized," as required, according to the manner of storage. Discovery was made that Eire eggs showing no indication of origin were arriving in the City. These, it was thought, were being shipped via Northern Ireland to Glasgow. One shipment from Eire via Northern Ireland was examined by Customs Officers, and a considerable number with no indication of origin were found.

Following upon this, all registered stores in the City were visited by the Food Inspectors, accompanied by an official from the Northern Ireland Department of Agriculture. A thorough examination was carried out, and many egg cases were opened. No contravention was discovered until the last store was visited, when a number of cases branded with the country of origin and other necessary marks were found to contain eggs which bore no mark of any kind. On enquiry, it was found that the registered owners of the stores were unaware that these cases contained unstamped eggs. The merchant who had deposited the cases had not declared them as containing unmarked eggs and had, it appeared, already removed part of the consignment. He was visited and asked to explain. The explanation given was that the eggs were purchased in Scotland at a time when they were plentiful, and were packed in used Eire cases collected from dealers. In view of the discovery by the Customs officials at the quay, this appeared a very doubtful story, and further, did not clear the merchant of the offence of having removed part of the consignment from the store without having had them properly stamped. An attempt by Customs to trace the cases back to the point where they had crossed the Irish border was unsuccessful. All the cases in the store belonging to the trader were opened, and each egg was properly marked before removal was permitted. These practices will be carefully watched in future both by Customs officials and by the inspectors of the Local Authority. It may be stated that regular inspection of Eire eggs shipped to Glasgow via Northern Ireland is not made by Customs here, as all Eire goods are examined at the Irish Land Boundary.

Inspection of Food and Food Premises.—Considering the large quantities of food handled in the City, it is satisfactory to report that it is seldom necessary to take action against a trader for dealing in unsound food. Traders desirous of having doubtful food examined frequently request that an inspector should call to give an opinion. Condemnation of food, therefore, in most instances, takes place by mutual agreement. On one occasion only was action taken against a merchant for having exposed for sale for human consumption unsound food, viz., grapes and tomatoes. These were seized and brought before the Stipendiary Magistrate, who granted a warrant for their destruction. At the subsequent trial the accused pled not guilty, alleging that the articles of food were not for sale. The charge was found proven and a penalty of £2 imposed.

For the detection of unsound food and to ensure compliance with the various Acts and Regulations, 11,612 inspections were made in the course of the year of markets, stores, shops, and places where food is stored. Altogether, 91 lots of food were destroyed, consisting chiefly of fresh and dried fruit, vegetables, various canned foods, ham, chickens, and confectionery. This amounted to a total of 27 tons, 6 cwts., 23 lbs. All the articles were so disposed of as to prevent their being used for human consumption. In several instances it was found that certain premises were not being kept in a satisfactory condition. Intimations to cleanse and carry out repairs and improvements were issued to defaulters, and all were duly complied with.

As complying with the conditions of the Public Health (Meat) Regulations (Scotland), 1932, ten premises were registered and the occupants granted certificates of approval by the Local Authority, while 34 copies of certificates were issued in respect of vehicles operating from these premises. Such places are used for the storage of meat and meat products, and are occupied by persons who do not keep open shop for the sale of these products. Inspections were regularly carried out during the year without any cause for complaint being discovered.

Merchandise Marks Act, 1926.—Some difficulty is found in enforcing the provisions of the various Orders made under this Act, and it would be of advantage if a better method of marking imported goods were adopted. The detection of imported butter continues to be a problem, and it is difficult to distinguish the product of one country from that of another when the butter has been removed from its container and has lost its original shape. It would assist in the identification of imported bacon if all home produce were branded with a particular mark. The

subterfuge of removing the skin which bears the imported mark would then be readily suspected. Likewise, the marking of imported dead poultry is unsatisfactory since it is an easy matter to remove a marking disc from an imported fowl. Where hen eggs in shell are concerned the passing off of imported eggs as "home" is taking place to a greater extent than is generally suspected. It is comparatively easy to remove the indication of origin from imported eggs by means of vinegar, acetic acid, or hydrochloric acid, and in some instances even by soap and water. Marking ink of a special indelible nature might be employed which, even if removed, would leave some sign discernible on an egg-shell, say, under ultra-violet light. Some such measure would appear to be desirable in order to protect the home article. There is a strong suspicion that certain persons make a clandestine business of removing marks from imported eggs and selling them afterwards as "fresh."

Eighteen cases of infringements of the various Orders were dealt with in the course of the year. These comprised failure to attach an indication of origin to apples, tomatoes, and butter, and the removal of the indication of origin from eggs. Seventeen convictions were obtained, while one case is pending. Fines amounting to £11 were imposed.

Fertilisers and Feeding Stuffs Act, 1926.—Five formal samples of fertilisers and 22 informal samples of feeding stuffs, obtained during the year, were submitted to the Agricultural Analyst for examination. The samples of fertilisers were procured in the official manner from dealers in the City, and the requirements for labelling, description, &c., were found to be well observed generally. Analyses showed the fertilisers to be in conformity with the Act, and the results have been duly reported to the Department of Agriculture for Scotland. The samples of feeding stuffs were taken informally from supplies forwarded to farmers. This year, with one exception, all were reported as being within the limits of variation allowed by the Statute and not to differ materially from the statutory statement supplied in each case. The exception consisted of Dairy Ration which was deficient in albuminoids and had an excess of fibre. This matter has been taken up with the supplier concerned.

Dairies.—At the end of the year the number of dairies on the register kept by the Local Authority was 1,769, which is a decrease of one from last year's figure. This shows an average of one dairy for every 637 of the population of the City. The total is made up as follows—61 producers, 22 wholesalers, 62 wholesale and retail dealers, 873 retailers of

loose milk, 715 retailers of bottled milk only, and 36 carts from without the district. These carts, for the purposes of the Act, are considered as premises within the City. Where bottled milk only is dealt in, a qualified certificate of registration is granted. This permits persons who occupy premises which do not fully comply with the dairy bye-laws to deal in milk, provided it is retailed in bottles capped and sealed as received from the wholesaler. The percentage of these dealers is 40·4 of the total number registered, compared with 38·6 in 1937.

21,360 inspections were made of dairies during the year, and 30 contraventions were discovered and dealt with. In 25 instances repairs and alterations were carried out as requested. One person was proceeded against for carrying on the business of a dairyman without having been given a certificate of registration by the Local Authority. A penalty of £2 was imposed.

Milk and Dairies (Scotland) Order, 1934.—Two prosecutions were taken for infringements of this Order, one for storing milk (ice cream) in a sleeping apartment and the other for storing milk (ice cream) in a place where it was liable to contamination by the effluvia of a dungstead. The offenders pled guilty in each case, and were fined £1 and £2 10s. respectively.

No cases were reported of persons selling cream or skimmed milk from unlabelled vessels, nor was any person found transferring milk from one vessel to another vessel in other than registered premises. Samples of cream were found to be free from any colouring or thickening matter, and the practice of adding these substances to cream may now be regarded as practically having ceased. In several instances it was discovered that milk was being consigned by producers in vessels which did not have their names and addresses attached or were not properly sealed. These contraventions were reported to the authorities concerned, and had their attention.

Food and Drugs (Adulteration) Act, Section 8—Registration of Butter Factories and Wholesale Dealers in Margarine, &c.—One margarine factory is on the register kept in accordance with the Act. This shows no change from the year previous. Premises registered to deal in margarine by wholesale number 146. Six applications for registration as wholesale dealers in margarine were received, and after inspection of the proposed premises, all were granted. One new butter factory was added to the register, and two were removed owing to the firms having given up business. Premises were inspected at intervals throughout the

year, and were found to be conducted in a satisfactory manner, no contraventions being discovered. Samples of butter and margarine obtained and submitted for analysis were satisfactorily reported upon. Details of the number on the register at the end of the year are as follows :—

Factories of margarine	...	...	...	...	...	1
Wholesale dealers in margarine	...	...	...	...	...	46
Factories of or wholesale dealers in milk-blended butter						—
Butter factories	...	...	...	...	...	19

Byres.—The addition to the City during the month of May of a large rural area has brought about a considerable increase in the number of dairy byres to be supervised. At present there are 61 milk producers on the register—an increase of 30 since last year—with 72 byres. Bye-laws of the counties which formerly controlled these additional byres differ in some respects from those of the City, and compromise has had to be made in the meantime in certain cases. This year again a number of the dairy byres have been vacated owing to the land being required for housing. Inspections made of byres totalled 486, and generally all were found to be well kept. Alterations and repairs were requested in 13 instances, and all work has been satisfactorily executed. Accommodation for 1,791 cows is provided and the average number kept is 1,652. One producer only in the City does not have grazing facilities.

Ice Cream Shops.—Registration is required of all ice cream dealers except in cases where the ice cream is sold in closed cartons, these being stored in refrigerators in approved premises. The number of dealers on the register at the end of the year was 528, a decrease of 6 from last year. 7,136 visits were paid to dealers' premises in the course of the year, and 10 contraventions of the bye-laws were discovered and remedied. In 9 cases repairs and alterations required were given attention.

One ice cream vendor who started an extensive business in the City without having been given a certificate of registration was brought before the Court and fined £1; a second for exposing ice cream in a place where it was liable to be contaminated was fined £2 10s.; and a third for storing ice cream in a sleeping apartment was fined £1.

To ascertain the measure of cleanliness observed, 33 samples procured from shops and street vendors were examined bacteriologically. These showed the following results :—

NUMBER OF COLONIES PER ONE MILLILITRE.

0— 30,000	30,001— 200,000	200,001— 500,000	500,001— 1,000,000 +
9	10	4	10

Seven samples had coliform organisms in 1/100 ml., 7 in 1/10 ml., 4 in 1 ml., and 15 samples were free of coliforms. Notification requesting greater cleanliness was given to all those whose samples contained more than 200,000 bacteria per ml.

Analyses of 35 samples submitted for chemical examination showed that some had been prepared from skimmed milk, some from full cream milk, and some from cream. The milk fat content varied from 1.09 per cent. to 12.58 per cent. It was found that ice cream of British manufacture had an average fat content of 6.67 per cent., while that not British averaged only 3.00 per cent.

A. M. STEWART,
Senior Food Inspector.

THE FOOD AND DRUGS (ADULTERATION) ACT, 1928.

TABLE SHOWING NATURE AND NUMBER OF TOTAL SAMPLES
PROCURED AND EXAMINED DURING 1938.

Nature of Sample.	Informal.		Statutory.		Nature of Sample.	Informal.		Statutory.	
	Number taken.	Number non-genuine.	Number taken.	Number non-genuine.		Number taken.	Number non-genuine.	Number taken.	Number non-genuine.
Acetic Acid ...	2	—	—	—	Coffee Essence with Chicory ...	1	—	—	—
Almonds, Ground ...	6	—	—	—	Cooking Fat ...	—	—	2	—
Angelica ...	3	—	—	—	Corned Beef ...	1	—	—	—
Apples, Dried ...	1	—	—	—	Cornflour ...	6	—	4	—
Apple Juice (Bottled) ...	1	—	—	—	Cream ...	27	—	3	—
Apricots, Dried ...	7	—	6	—	Cream Custard ...	—	—	1	—
Arrowroot ...	11	—	6	—	Cream Powder ...	1	—	—	—
Aspirin Tablets ...	6	—	—	—	Cream of Tartar ...	21	—	10	—
Bacon ...	—	—	3	—	Currants ...	13	—	5	—
Baking Powder ...	3	—	—	—	Curry Powder ...	9	—	4	—
Baking Soda ...	—	—	1	—	Custard Powder ...	11	—	6	—
Barley ...	16	—	7	—	Custard Pudding ...	1	—	—	—
Beans with Sauce ...	1	—	—	—	Dates ...	3	—	—	—
Beer ...	9	—	—	—	Dripping ...	22	1	26	3
Bicarbonate of Soda ...	2	—	—	—	Easton's Syrup ...	2	—	—	—
Biscuits ...	7	—	—	—	Egg, Liquid ...	1	—	—	—
Black Pudding ...	2	—	—	—	Egg Substitute ...	1	—	—	—
Boracic Acid Powder ...	5	—	4	—	Egg Macaroni ...	2	—	1	—
Borax ...	2	—	4	—	Farola ...	—	—	1	—
Brandy ...	4	—	—	—	Figs ...	10	—	1	—
Butter ...	88	1	35	1	Fish Cakes ...	3	—	—	—
Calcined Magnesia ...	1	—	—	—	Fish, Canned ...	6	—	—	—
Cascara Sagrada ...	4	—	—	—	Fish Dressing ...	2	—	—	—
Celery, Canned ...	1	—	—	—	Fish Paste ...	7	—	—	—
Cheese ...	19	—	8	—	Flour, Self Raising and Ordinary ...	8	—	17	—
Chemical Food ...	18	1	1	—	Flowers of Sulphur ...	6	—	6	—
Cherries, Canned and Glace ...	5	—	—	—	Fruit Cocktail ...	1	—	—	—
Chicken and Ham Roll ...	1	—	—	—	Fruit Pie ...	1	—	—	—
Cider ...	4	—	—	—	Fruit Salad, Dried ...	4	—	5	—
Cinnamon, Ground ...	23	—	6	—	Fruit Sauce ...	5	—	—	—
Citron Peel ...	2	—	—	—	Fuller's Earth Cream ...	1	—	—	—
Cocoa ...	16	—	3	—	Gelatine ...	6	—	—	—
Cocoanut, Ground and Desicated ...	3	—	1	—	Gin ...	7	—	—	—
Coffee ...	32	—	17	—	Ginger, Ground and Preserved ...	21	—	6	—
					Glycerine ...	9	—	—	—
					Glycerine of Thy-mol, Compound ...	2	—	—	—

Nature of Sample.	Informal.		Statutory.	
	Number taken.	Number non-genuine.	Number taken.	Number non-genuine.
Grape Fruit, Canned ...	1	—	—	—
Gravy Salt ...	1	—	—	—
Gregory's Powder ...	9	1	1	—
Haggis ...	2	—	—	—
Ham ...	—	—	1	—
Honey ...	6	—	—	—
Ice Cream ...	36	—	—	—
Ice Cream Powder ...	5	—	—	—
Jaffa Juice ...	1	—	—	—
Lard ...	11	—	14	—
Lemon Barley Crystals ...	1	—	—	—
Lemon Curd ...	3	—	—	—
Lemon Peel ...	7	—	—	—
Lemon Powder ...	2	—	—	—
Lentils ...	5	—	1	—
Linseed Meal ...	4	—	2	—
Liquorice Powder, Compound ...	—	—	5	—
Liquorice Root ...	3	—	—	—
Lobster, Canned ...	1	—	—	—
Macaroni ...	13	—	1	—
Malt Extract with Cod Liver Oil ...	3	1	1	1
Margarine ...	17	—	22	—
Meat Paste ...	12	—	—	—
Meat, Potted ...	14	—	—	—
Meat Spread ...	1	—	—	—
Milk, Malted ...	3	—	—	—
Milk, Skimmed ...	6	—	6	—
Milk, Sweet ...	2,178	54	802	27
Milk, Condensed Full Cream Sweetened ...	9	—	—	—
Milk, Condensed Full Cream Unsweetened ...	9	—	—	—
Milk, Condensed Machine Skimmed ...	18	—	—	—
Milk, Dried ...	6	—	—	—
Milk Pudding, Canned ...	1	—	—	—
Mince ...	22	4	116	36
Mincemeat ...	6	—	—	—
Mince Pies ...	4	—	—	—

Nature of Sample.	Informal.		Statutory.	
	Number taken.	Number non-genuine.	Number taken.	Number non-genuine.
Mineral Water, Sweetened ...	14	—	—	—
Mixed Peel, Canned ...	2	—	—	—
Muscatsels ...	3	—	—	—
Mustard ...	5	—	3	—
Oat Flour ...	3	—	1	—
Oatmeal ...	5	—	1	—
Oil, Almond ...	16	—	4	—
Oil, Camphorated ...	24	1	4	—
Oil, Castor ...	7	—	—	—
Oil, Cod Liver ...	8	—	5	—
Oil, Eucalyptus ...	16	—	4	—
Oil, Olive ...	26	1	6	—
Oil of Wintergreen ...	1	—	—	—
Ointments, Medicinal ...	23	1	1	—
Oranges, Canned ...	2	—	—	—
Orange Juice ...	1	—	—	—
Orange Peel ...	14	—	2	—
Ox Tongue Loaf ...	1	—	—	—
Paraffin, Medicinal ...	1	—	—	—
Peas, Canned ...	10	—	—	—
Peas and Carrots, Canned ...	1	—	—	—
Pears, Dried and Canned ...	3	—	1	—
Pease Meal ...	8	—	2	—
Pepper, Black ...	7	—	1	—
Pepper, White ...	21	—	23	—
Peroxide of Hydrogen Solution ...	2	—	—	—
Pickles ...	1	—	—	—
Pineapple, Canned ...	3	—	—	—
Pineapple Juice, Canned ...	1	—	—	—
Plum Pudding ...	2	—	—	—
Potatoes, Canned and Fried ...	2	—	—	—
Potted Head ...	1	—	—	—
Preserves ...	29	1	—	—
Prunes ...	20	—	11	—
Quinine Sulphate ...	1	—	—	—
Quinine Tablets, Ammon. ...	1	—	—	—
Raisins ...	6	—	1	—

Nature of Sample.	Informal.		Statutory.		Nature of Sample.	Informal.		Statutory.	
	Number taken.	Number non-genuine.	Number taken.	Number non-genuine.		Number taken.	Number non-genuine.	Number taken.	Number non-genuine.
Raspberry Powder	1	—	—	—	Syrup ...	2	—	—	—
Rhubarb Powder	1	—	—	—	Syrup, Medicinal	1	—	—	—
Rice ...	18	—	7	—	Syrup of Figs, Compound	4	—	—	—
Rice Custard Powder ...	—	—	1	—	Table Jelly ...	17	—	—	—
Rice Flour ...	—	—	1	—	Tapioca ...	—	—	6	—
Rum ...	7	2	2	—	Tartaric Acid ...	10	—	6	—
Rusks ...	1	—	—	—	Tea ...	2	—	—	—
Sago ...	7	—	—	—	Tincture of Cardamon, Compound ...	1	—	—	—
Salmon Roll ...	2	—	—	—	Tincture of Iodine	26	3	6	2
Salts, Medicinal	18	1	3	—	Tincture of Ipecacuanha ...	7	—	—	—
Sardines ...	15	—	—	—	Tincture of Quinine, Ammon.	4	2	1	—
Sauce ...	17	—	—	—	Tomatoes, Canned	1	—	—	—
Sausage Meat ...	—	—	11	—	Tomatoes, Raw	14	—	—	—
Sausages ...	10	2	23	3	Tomato Juice ...	1	—	—	—
Seidlitz Powder	2	—	—	—	Tomato Ketchup	1	—	1	—
Semolina ...	17	—	3	—	Tomato Puree, Canned	9	—	—	—
Shrimps, Potted	2	—	—	—	Treacle ...	2	—	—	—
Soup ...	1	—	—	—	Tripe ...	4	—	—	—
Spaghetti ...	1	—	—	—	Vanilla Powder ...	2	—	—	—
Spice ...	1	—	1	—	Vinegar ...	6	—	3	—
Spinach, Canned	1	—	—	—	Whisky ...	69	19	8	1
Stout ...	2	—	—	—	Wine, Alcoholic	8	—	—	—
Strawberries, Canned ...	1	—	—	—	Wine, Non-Alcoholic ...	8	—	—	—
Suet ...	22	—	2	—					
Sugar ...	29	—	2	—					
Sultanas ...	10	—	4	—					
Sweet Spirits of Nitre ...	2	1	—	—					
					Totals	3,624	97	1,333	74

THE FOOD AND DRUGS (ADULTERATION) ACT, 1928.

Details of Samples, &c., in which proceedings were instituted during 1938.

Number of complaints.	Nature of sample and alleged offence.	Number of convictions.	Amount of fines imposed.	Number dismissed or found "not proven."	Number deserted simpliciter.	Warranty Defence sustained.	Amount of expenses paid.
1	<i>Butter</i> —Contained an admixture of foreign fat	1	£ 5 0 0	—	—	—	—
4	<i>Dripping</i> —Contained artificially hardened fat	2	5 0 0	—	2	—	—
1	<i>False Warranty</i> —(Tincture of Iodine)	—	—	1	—	—	—
2	<i>Margarine</i> —(a) Failing to attach the statutory label when exposed for sale by retail; and	2	4 0 0	—	—	—	—
	(b) Selling by retail in other than the statutory wrapper ...						
10	<i>Milk (Sweet)</i> —Deficient in milk fat ...	9	28 0 0	—	1	—	—
6	<i>Milk (Sweet)</i> —Deficient in milk solids other than fat	4	17 0 0	1	1	—	—
2	<i>Milk (Sweet)</i> —Deficient in milk fat and in milk solids other than fat ...	1	2 10 0	—	1	—	—
18	<i>Mince</i> —Contained preservative during proscribed period	17	29 10 0	1	—	—	—
3	<i>Mince</i> —Contained an excess of preservative during permitted period	3	7 0 0	—	—	—	—
2	<i>Sausages</i> —Contained an excess of preservative	2	3 5 0	—	—	—	—
1	<i>Tincture of Iodine</i> —Deficient in alcohol	1	1 10 0	—	—	—	—
1	<i>Tincture of Iodine</i> —Deficient in iodine and potassium iodide	—	—	—	—	1	—
1	<i>Whisky</i> —Contained an excess of water	1	(Admonished)	—	—	—	—
52		43	£102 15 0	3	5	1	—

ABSTRACT OF PROCEEDINGS UNDER OTHER THAN FOOD AND DRUGS (ADULTERATION) ACT DURING 1938.

Act, Order, &c.	Nature of alleged offence.	Number of complaints.	Number of convictions.	Amount of fines imposed.	Number dismissed, found "not proven," or deserted simpliciter.
Milk and Dairies (Scotland) Act, 1914 ...	Failing to register as a dairy-man	2	2	£ 3 0 0	—
Milk and Dairies (Scotland) Order, 1934 ...	Storing milk and milk vessels in a sleeping apartment ...	1	1	1 0 0	—
Do.	Storing milk in a place where it was liable to be contaminated by impure air ...	1	1	2 10 0	—
Glasgow Police Amendment Act, 1890 ...	Exposing unsound grapes and tomatoes for sale	1	1	2 0 0	—
Merchandise Marks Acts and Orders	Imported raw tomatoes: Failing to label with an indication of origin ...	10	10	6 0 0	—
Do.	Imported butter: Failing to label with an indication of origin	5	5	4 0 0	—
Do.	Imported fresh apples: Failing to label with an indication of origin	2	2	1 0 0	—
Do.	Imported hen eggs in shell: Selling imported eggs in shell without their bearing an indication of origin ...	1 (pending)		—	—
		23	22	£19 10 0	—

SECTION XI.

AIR PURIFICATION—SMOKE ABATEMENT.

In the Report for last year there were included notes on an enquiry as regards the deposit in the old soot gauges throughout the city, compared with the new standard outfit supplied by the Fuel Research Department of the Department of Scientific and Industrial Research. As a result of these observations it was decided to reduce the number of soot gauges from fourteen to five, *i.e.*, a central one at Glasgow Cross and the other four at cardinal points, north, south, east and west in the city. These points were selected as being the most suitable for indicating the influence of prevailing winds on the amount of deposit from month to month. The returns for 1938 are based on the records of the new gauges.

The total annual deposit for 1938 was 250 tons per square mile, compared with 232 in 1937, an increase of 18 tons. This adverse result is to some extent due to the improvement in industrial conditions and probably also to the heavy rainfall, for, as the Senior Smoke Inspector points out in his Report the monthly deposit was considerably affected because of the weather conditions. For instance, in April, when the rainfall was phenomenally low, 0.68 inches, the deposit was only 8.87 tons, whereas in the month previous the respective figures were 2.85 inches and 17.58 tons, and in the month following the rainfall was 4.36 inches and the deposit 18.53 tons.

The influence of rainfall on amount of deposit is shown in the diagram given on the following page, comparing Glasgow with London, for the rainfall in Glasgow is on the average almost double that for London. Over the period from 1915 the deposit in the

atmosphere of Glasgow would appear to be rather less than that of London. The records for London are taken from figures published by the Department of Scientific and Industrial Research in the Annual Report on the Investigation of Atmospheric Pollution, where the year is taken to the end of March. There are various facts to remember in considering the variations in the amount of deposit over the period charted. During the earlier years considerable reduction of deposit took place as a result of improvements effected in boilers and generating plants, and the more complete combustion of fuel. This improvement has been put at 50 per cent.

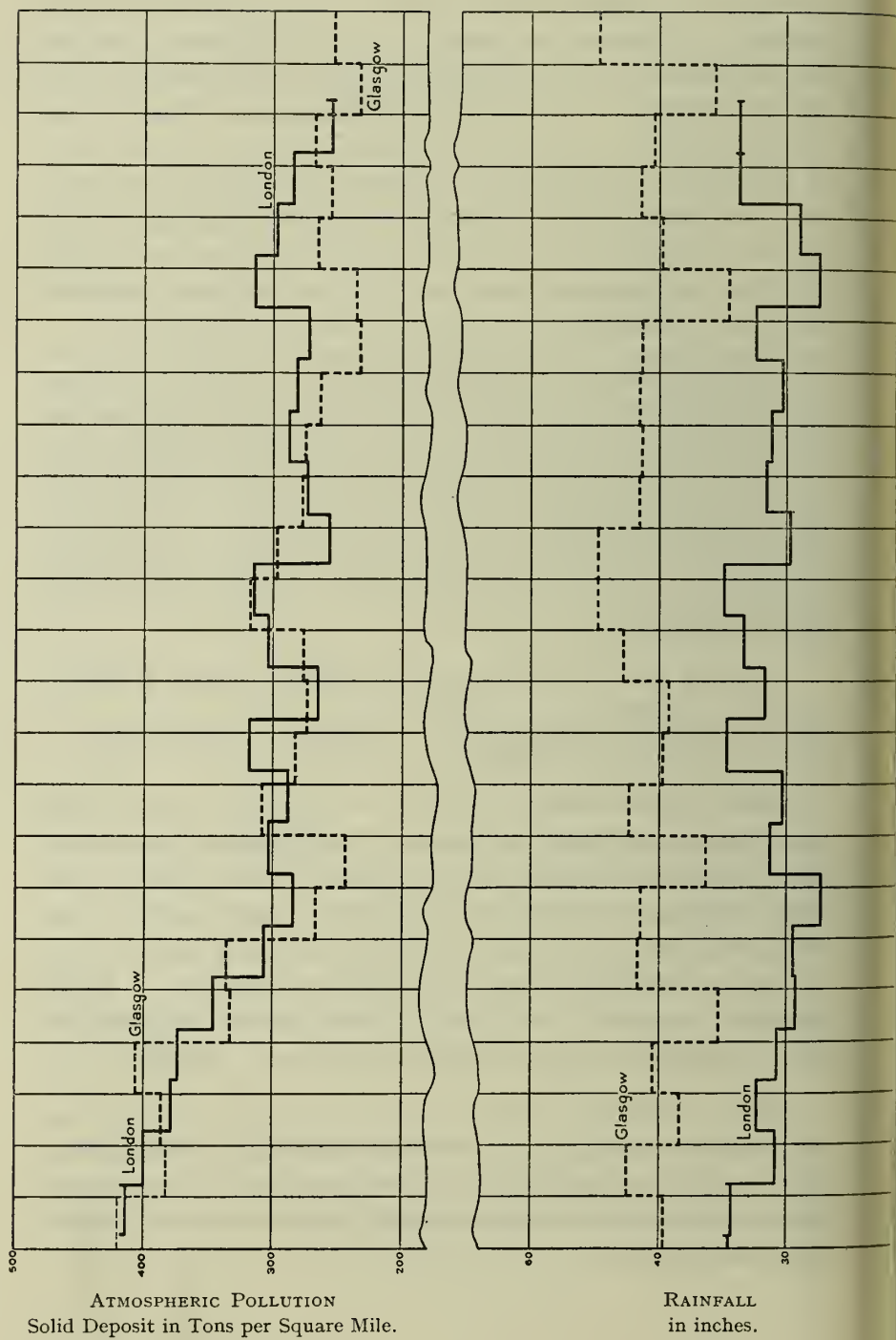
During the post-war period the variations in atmospheric pollution are more associated with periods of industrial prosperity or depression. After the War there was a short period of industrial activity followed by the depression of 1921-22; again in 1929-33 there occurred a long deep industrial depression. These periods coincide more or less with the general trend of the curve for both cities shown in the chart, the atmosphere being more polluted with smoke during times of industrial activity.

In recent years, however, the atmospheric pollution in London has been somewhat greater than in Glasgow, probably owing to its more rapid industrial expansion.

With regard to rainfall, that of 1938 in Glasgow was the highest since records were begun; the rainfall for 1937 was one of the lowest. These facts are reflected in the amount of the deposit. This relationship between rainfall and deposit in the gauges and this association is shown to exist throughout the period charted. For instance, in 1919, both rainfall and deposit fell sharply. A similar experience is noted in 1922, 1924-25, and again in 1932-33, while rises in both took place in 1920-23, 1927-28, and 1934-36.

Careful examination of the curve would seem to indicate that the correlation of deposit with increased rainfall is low during recent years and this is probably due to the lower level of atmospheric deposit now recorded, variations being about five tons of deposit per inch of rainfall.

Atmospheric Pollution in relation to amount of Rainfall.
GLASGOW and LONDON.



The following notes are submitted by the Senior Smoke Inspector:—

Under the terms of the Glasgow Police (Further Powers) Act, 1892, Section 31, relating to industrial smoke nuisances, it is stated that "...unless he proves that he has used the best practicable means for preventing smoke and has carefully attended to and managed such furnace or fire so as to prevent, as far as possible, smoke issuing therefrom . . .," the respondent shall be liable to the penalties specified. Under the heading "best practicable means" there comes the question of the nature and quality of the fuel used. If fuels are made use of, which, by reason of type or grading, are not suitable for particular conditions of plant, or if such fuels are of inferior quality as regards ash content and calorific value, then the "best practicable means" are not being adopted.

The above observation is inspired by the fact that, owing to the now greatly increased cost of fuel, many plant owners using hand-stoked boilers are resorting to the use of fuels which are decidedly inferior in quality and grading, presumably in an effort to reduce fuel costs. In consequence the Smoke Inspectors are noting that many of the chimneys connected with such plants which were normally quite satisfactory are now prolific smoke emitters and have occasioned the issue of warning notices, while a few recurrent offenders have been prosecuted.

Apart from the immediate question of smoke emission, the economic wisdom of such a policy is doubtful when the extra transport of non-combustible material and later the removal of the heavier residual ash, the dirtier condition of flues and heating surfaces involving more frequent cleaning operations, etc., are included in the final balance-sheet. It will be surprising if at the end of the year any financial advantage has accrued.

Another cause of excessive smoke which has been increasingly encountered by the Inspectors during the past year, particularly with regard to boiler plants, is the lack of capacity to meet the loads demanded at reasonable rates of fuel consumption—in other words, the forced firing of overloaded boilers. This has been the case in connection with many smaller installations. The Glasgow area contains a large number of small plants and increases in the process operations have not, in too many instances, been provided

for by the addition of increased steaming capacity. Under such conditions heavy smoke emission and thermal inefficiency are inevitable. Here the immediate cause is again failure to adopt the "best practicable means."

Summary of Work done.—The following is a summary of the observation and inspection work, etc., carried out by the staff during the year of all chimneys (other than domestic) and the accompanying plants:—

Number of observations of chimneys...	...	...	27,657
Number of inspections of steam boilers and other furnaces	...	...	1,016
Number of intimations of excess smoke given	...	...	379
Number of initial Warning Notices served	...	...	36

Observations on Plant Improvements during 1938.—The primary function of the Smoke Inspectorate is to observe and record contraventions of the local smoke enactment and, having done so, to advise on practicable remedial measures that may be adopted to suit each individual case so as to prevent recurrence of such unnecessary emission. At the same time the Inspectors note such improvements in plant and its management as may be calculated to further smoke abatement, and in this way assist the movement wherever possible. The following table indicates the nature and numbers of such improvements coming within the knowledge of the Department during the year.

Number of new steam boilers installed to give increased power	...	31
Number of mechanical stokers fitted to steam and heating boiler furnaces	...	34
Number of furnaces in which anthracite, coke, or other non- bituminous fuels have been substituted for bituminous coal	...	26
Number of steam boilers replaced by electric motors using public power supply	...	4
Number of new chimneys erected or existing chimneys heightened to give increased draught and to carry gases higher	...	20
Number of boiler and process furnaces fired with oil fuel or gas, replacing bituminous coal	...	3
Number of mechanical dust arresters installed	...	6
Number of improvements to plants not coming under any of the above headings	...	8

It is gratifying to note the number of steam boilers which have been installed in connection with moderate and large scale operations. The effect has been, in almost every instance, to relieve the high loading conditions which prevailed. Likewise, the number of mechanical stoker installations during the year has been very satis-

factory. The new feature being recorded in these tables is the number of grit arresting plants being installed. With the increasing use of small graded fuels working in conjunction with forced draught systems, the grit nuisance is on the increase, and the Department is paying special attention to this aspect of the problem. A number of firms have been approached in this regard with the results indicated above. In the near future further improvements of this nature are likely to be effected.

A few of the more important improvements carried out might be referred to.

At an extensive laundry plant in the west end of the city, having a battery of two large Lancashire boilers, an even larger one has replaced one of the existing boilers, while an up-to-date mechanical stoking plant with individual motor drives replaces hand stoking. As the surrounding area is definitely residential, a brick chimney, 120 feet in height, has been erected.

At a large electrical generating station on the western boundary of the city, a further addition of four large water tube boilers, complete with chain-grade stokers, dust arresters, air pre-heaters, and all mechanical auxiliaries, has been installed.

Also, in the same area, a large engineering firm has replaced a Lancashire boiler plant by a water tube boiler, complete with chain-grade stoker, etc., and, in addition, a much higher chimney has been erected. The former plant occasionally came under the notice of the Inspector for the district.

A well-known departmental store in Sauchiehall Street has completely reorganised its boiler plant by installing two large capacity economic type steam boilers fitted with mechanical stokers under automatic control. The cost is in the region of about £7,000. The firm had been warned from time to time in respect of the heavy smoke emissions from the chimney connected with the old plant. This is a noteworthy improvement occurring, as it does, right in the centre of the business section of the city.

Prosecutions.—During the past year a total of 31 prosecutions were taken before the Stipendiary Magistrate in the Central Police Court. These cases, being of a technical nature, are all heard there. A conviction was recorded in each case and fines totalling £41 were imposed. In every instance the respondents had been warned on several occasions regarding the undue emission of smoke from the chimneys concerned.

Of the total prosecutions taken, 23 were in respect of first offences, the average penalty being £1 0s. 5d.; 5 were in respect of second offences, the average penalty being £1 12s.; 2 were in respect of third offences, the average penalty being £2 5s.; while 1 case concerned a fourth offence where the maximum penalty of £5 was imposed. As the removal of a cause of nuisance is more desirable than a recorded conviction, it is only when it appears that warnings are being ignored that legal proceedings are instituted.

Complaints Investigated.—The investigation of complaints of smoke, grit, dust, soot and fumes occasioned by industrial combustion processes is an aspect of the work which is commented upon each year in this Report because of its important nature, and also because of the time occupied in this connection. Complaints by letter are “filed” complaints and those received by personal intimation or telephone are also tabulated on a “complaints” form and duly investigated and reported upon. Such recording enables initial and subsequent complaints regarding a particular plant to be followed up, thus ensuring that remedial measures are adopted. If such measures are not given effect to, or if even, after a lapse of time, a reversion takes place to the original conditions, the fact can be checked up from the records.

The establishment of new housing schemes around or adjacent to factories and industrial plants has led to an increase, year by year, in the number of complaints handled. Such complainers usually preface their early letters by the statement that they “are not going to have their new houses and furniture polluted by such filthy chimneys near them” and “they must be removed at once.” Each complainer, whenever possible, is personally interviewed. Improvement in stoking methods, changes in types and grades of fuel used, heightening of chimneys, alterations in furnace and flues, removal of small chimneys to more remote sites, etc., are among the measures adopted. Generally the larger firms are more readily convinced than the smaller, many of the latter giving the Inspectors much trouble before they decide to make alterations which will remove the cause of nuisance. Most complaints are occasioned by smoke emissions which do not always come within the “dense” category, and moral suasion and technical argument are the factors which convince the offenders to effect changes. In some instances, recourse to prosecution is the only method, unfortunately, which enforces improvement.

Road Nuisances.—Under this heading comes smoke from steam wagons, heavy traction engines, road rollers, motor vehicle exhausts, and portable pitch melters. In past reports these classes have been discussed separately and at some length. As compared with former years, very few steam wagons now operate and only in isolated instances do any of the few that are running cause smoke emission of such density or duration that can be dealt with. Several drivers were warned and instructed during the year. Some steam roller

drivers were warned regarding the use of highly bituminous fuels and heavy stoking, while two firms operating tar melters were given intimations regarding smoke of "unnecessary density" and the non-use of coke. These appliances, almost without exception, use coke and where kindling is carefully done no nuisance is caused when they are not immediately adjacent to dwelling-houses or shops, etc. Motor exhausts, including both petrol and compression ignition (Diesel) engined vehicles, mostly 'buses, have not given much trouble during the past year. Apart from the fact that drivers are now well aware that nuisance from heavy exhausts will not be tolerated, being a contravention of the Road Traffic Act, the advance made in engine design and improvement in types of fuel used have resulted in more satisfactory running so far as smoke and fumes are concerned.

Railway Running Sheds.—From time to time over a number of years, complaint of smoke nuisance has been made to this Department by tenants residing in housing schemes in the neighbourhood of railway locomotive running sheds. Various measures have been carried out with a view to removing the cause of complaint, but so far it has not been found possible to obviate entirely the nuisance, owing to the nature and the extent of the work carried out at such sheds. Within the Glasgow area there are a number of such premises of the largest size in at least one of which anything up to 150 engines are handled in the course of a single day. The firing and smoke-tube cleaning, re-kindling and subsequent stoking of such numbers of locomotives mean that *in cumulo* a very large amount of smoke is emitted. The re-kindling and firing take place under the most adverse combustion conditions—that is, tube boilers, cold furnaces, and very often no steam to induce a draught through the grates—and the smoke, or rather distillation products, are emitted at comparatively low levels. It is not surprising that nuisances are caused to the residents who may be unfortunately contiguous to the sheds. One such large shed has been the cause of persistent complaints during the past year from private individuals, tenants' committees and ward committees. Much time has been spent in observation and inspection work. The railway company has been conferred with and further steps are being taken to reduce the aggregate of smoke emission. The position here is further complicated by the fact that these long-established sheds will be in the centre of a very large new housing area.

Shipping in the Harbour.—Systematic observation was maintained in the dock and river areas during the year. As the result of complaints being received from time to time, special early and late observations were necessitated and initial warning notices were sent to the agents of a few shipping companies who had not previously been the subject of complaint. During the year coastwise vessels were again found to be the most persistent offenders and usually during the period when steam was being raised. In many instances it was found that this operation had to be expedited and led to some forcing of the fires. Smaller craft of the tugboat and "lighter" type are a prolific source of nuisance, the former by reason of the exacting manoeuvring which they have to carry out, and the latter on account of the apparently narrow margin of boiler power with which they are equipped.

During the year two prosecutions were taken against recurring offenders—one in the case of a coastwise vessel for a second offence, and the other in respect of a large ocean-going vessel which had been warned on her last visit to this Port.

Ship stoke-hold practice varies considerably from that on shore, and the Smoke Inspectors being qualified marine engineers are quite conversant with such conditions and know what is practicable and otherwise.

Classes in Smoke Abatement and Boilerhouse Practice (Twenty-third Annual Winter Session).—The evening classes for the instruction of stokers, boiler attendants, plant engineers and others interested in the principle of fuel combustion, boiler efficiency and furnace management, held under the joint aegis of the National Smoke Abatement Society, Scottish Branch, and the Corporation of Glasgow, Public Health Department, concluded the session on 14th March, 1939. Since the inception of these classes in 1910 (excepting the War years) over 2,300 men have enrolled. Although the classes were enrolled during the September crisis and this had an adverse effect on the actual enrolments and subsequent attendance, the number was again high—a total of 136 in both the Ordinary and Advanced classes, the respective figures being 98 and 38. The classes continue to be very popular and during past years quite a number of men have come from outside areas. It is found by them that the tuition given, apart from its technical interest, is of distinct practical value in their daily work, both from the point of view of smoke abatement and increased efficiency. The average

attendance over the session was 68.3 per cent. in the Ordinary class, and 81.1 per cent. in the Advanced—a combined average of 74.7 per cent. After the enrolment a number of naval reservists were called up and did not return to the classes on demobilisation. The fee payable was again the usual nominal one of 3s. 6d. A total of 24 lectures was delivered in the classes and, in addition, two refresher lectures were given to the 16 candidates going forward to the City and Guilds of London Examination in boilerhouse practice. Class visits during the session were made to the Dalmarnock Power Station of the Electricity Department, the new and up-to-date Lancashire steam boiler plant of the Western Infirmary at Partick, and again to the Refuse Destructor Power Station of the Cleansing Department at Govan. A very large number of members turned out at these visits which were much appreciated. Visits such as these are always found to be of distinct educational value. The routine examinations were held on Saturday, 18th March, 65 men coming forward, 42 from the Ordinary class and 23 from the Advanced. Two-and-a-half and three hours were the times allowed for the respective question papers. Twenty-six men in the Ordinary examination and eighteen men in the Advanced gained Merit Certificates, the first three eligible members on the respective lists being the prize winners. The annual social meeting of the Branch will be held at the beginning of May when the Certificates and Prizes will be distributed.

Soot-Collecting Gauges.—Throughout the city area there are now five collecting stations, suitably situated in the public parks and in hospital grounds. Until two years ago there were nine such gauges and at that time the number was reduced. The locations are chosen so as to be as clear of any mechanical interference as possible, and free from local influence or contamination in the form of washings from trees, shrubbery, roofs, or dust from roads or paths. To get a site complying with these necessary conditions is not so easy as might appear at first sight, and the sites chosen were only decided upon after much thought. The gauges are placed approximately north, south, east, west and central so as to come under the influence of the varying wind directions. The central gauge is placed at Glasgow Cross on the roof of the Corporation Chemist's Laboratory.

These precipitation gauges consist essentially of a specially formed collector basin of heavy, high-quality glass connected to a glass receiving jar with a suitable air outlet. The area of the collector

basin is of known dimensions. The whole is fixed on a suitable iron stand, designed so as to preclude contamination from birds, etc., and is securely anchored *in situ*. The rain water collected at the end of each month is immediately analysed by the City Analyst to determine the extent of precipitated atmospheric impurities consisting of soot, dust and other soluble and insoluble elements.

The precipitation during 1938 amounted to the equivalent of 250.32 tons per square mile, being a mean monthly figure over the year of 20.86 tons. This shows an increase of 18.66 tons per square mile for the year. The average figure for the previous six years is 248.35. The figure for the present year, when compared with this amount, shows an increase of 1.97 tons. The mean rainfall for the six-year period was 67.43 mm. per month, while that for 1938 was 92.80 mm. per month. Not only has total rainfall a direct bearing on the precipitation figures recorded, but also the incidence or frequency of the rainfall throughout the year. In comparing the six summer months (April—September) and the six winter months (October—March) of 1938, it is found that the mean monthly precipitation over the “summer” period amounted to 15.77 tons per square mile, owing to a rainfall of 78.06 mm., while the “winter” months had a precipitation of 25.95 tons and a rainfall of 107.55 mm. Thus, an increase in rainfall of 29.49 mm. resulted in a recorded increase of impurities of 10.18 tons per square mile per month. Continuous westerly winds almost invariably cause a rise in the chlorine (Cl). This was the case during the months of January and February when these amounts rose to approximately twice the normal for that period of the year, due to the continuous westerly winds.

The table appended hereto gives the average monthly deposit of each element of atmospheric pollution for the year.

THOMAS M. ASHFORD,
Senior Smoke Inspector.

AVERAGE DEPOSIT OF EACH ELEMENT OF ATMOSPHERIC POLLUTION FOR EACH MONTH OF 1938.

		English Tons per Square Mile.																							
		Insoluble Matter.				Soluble Matter.				Included in Soluble Matter.															
		Tar.	Carbonaceous other than Tar.	Asb.	Total Insoluble Matter.	Loss on Ignition.	Asb.	Total Soluble Matter.	Total Solids 1938.	Sulphate, as SO ₃ .	Chlorine, as Cl.	Ammonia as NH ₃ .	Total Solids.												
		Rainfall in Millimeters.																							
		Month.																							
		...	January	...	February	...	March	...	April	...	May	...	June	...	July	...	August	...	September	...	October	...	November	...	December
Mean of 5 Stations		129.20	.19	5.28	11.25	16.72	10.03	12.06	22.09	38.81	3.37	6.24	.26	22.42	25.35	22.10	22.36	26.04	17.86						
" 5 "		59.63	.44	3.31	8.96	12.71	6.13	7.55	13.68	26.39	2.65	4.24	.41	28.14	16.76	23.43	18.38	20.19	20.00						
" "		64.07	.23	2.92	7.92	11.07	2.73	3.78	6.51	17.58	1.80	1.05	.17	10.33	22.66	22.38	19.65	17.11	22.67						
" "		12.76	.13	.83	3.20	4.16	2.16	2.55	4.71	8.87	1.45	.46	.10	20.49	15.30	17.47	30.25	17.94	20.11						
" "		86.45	.45	2.35	4.99	7.79	5.40	5.34	10.74	18.53	3.48	2.76	.15	17.16	16.97	12.72	19.55	18.81	17.07						
" "		123.90	.13	2.38	4.55	7.06	5.28	4.07	9.35	16.41	2.38	1.04	.15	21.36	18.70	26.39	16.06	16.67	19.68						
" 4 "		102.74	.50	3.74	5.48	9.72	3.74	2.88	6.62	16.34	1.78	.73	.26	16.20	17.65	14.39	24.89	21.70	24.04						
" "		70.72	.22	3.45	7.15	10.82	3.68	4.58	8.26	19.08	2.61	.60	.06	16.76	15.69	19.79	18.96	15.52	19.05						
" "		71.80	.35	2.59	5.97	8.91	3.04	3.43	6.47	15.38	2.23	.51	.14	16.96	20.54	22.75	22.20	12.24	18.42						
" "		172.36	.18	3.07	7.21	10.46	3.78	6.65	10.43	20.89	3.34	2.83	.27	23.16	34.46	32.62	26.98	20.88	17.56						
" "		149.42	.19	4.28	10.38	14.85	6.70	7.65	14.35	29.20	3.27	2.54	.36	17.60	26.70	19.65	25.35	19.09	21.77						
" "		70.58	.25	3.57	6.80	10.62	2.49	9.73	12.22	22.84	2.86	1.32	.29	21.08	36.29	31.49	20.49	30.50	16.13						
Yearly Deposit in Tons per Sq. Mile		1113.63	3.26	37.77	83.86	124.89	55.16	70.27	125.43	250.32	31.22	24.32	2.62	231.66	267.07	255.18	265.12	236.69	234.36						
Monthly Mean of all Gauges		92.80	.27	3.15	6.99	10.41	4.60	5.85	10.45	20.86	2.60	2.03	.22	19.30	22.25	21.26	22.09	19.72	19.53						

SECTION XII

FACTORIES ACT, 1937.

This new Act, which is more comprehensive than the previous Act of 1901, places more responsibility on Local Authorities in the supervision of factories.

The term “workshop” is discontinued and premises in which persons are employed in the making, repairing, or adapting for sale of any article are now all defined as “factories.” These are divided into two classes :—

- (a) Factories in which mechanical power is used in aid of the manufacturing process.
- (b) Factories in which no mechanical power is used in aid of the manufacturing process.

The term “factory” has now been extended to include such places as any yard or dry dock, any sorting yard attached to a factory, any bottling or packing store in connection with a factory, laundries, institutions, etc. Even the construction of a building is deemed to be a factory for certain provisions of the Act. A register must be kept of all factories, mechanical and non-mechanical whereas formerly workshops only were registered.

There are considerable changes in the new Act relating to cleanliness, overcrowding and ventilation. These provisions are to be enforced by the inspectors of the Local Authority in non-mechanical factories as was formerly the case in workshops. In addition, the inspectors must now enforce provisions relating to temperature. Those relating to sanitary accommodation, formerly enforced by the Inspector of Factories, are now enforced by the sanitary inspector in all factories whether mechanical or non-mechanical.

Changes in the health provisions are as follows :—

- (a) *Cleanliness*—Every factory must be kept clean and free from nuisance as required by the former Act. Now any accumulations of dirt and refuse must be removed daily from floors, benches, and passages ; floors of all workrooms must be swept weekly and washed, if necessary ; all walls and ceilings of work-

rooms and passages must be washed with hot water and soap every fourteen months, or limewashed every fourteen months, and further, if painted or varnished, paint or varnish must be renewed every seven years. Formerly these requirements only applied to factories under the supervision of the Factory Inspector; whitewashing or cleansing in workshops was only necessary when called for. Under the new Act all places are on the same footing as regards periodical cleansing, namely, every fourteen months, except that in non-mechanical factories where less than ten persons are employed, the Medical Officer of Health may exclude these from this cleansing work if he thinks such work unnecessary, and, in the case of other non-mechanical factories, the Medical Officer of Health may approve of some other method of cleansing.

The Secretary of State may exempt any particular class of factory from these provisions. Under the old Act, any workshop not kept in a clean condition and free from nuisance was dealt with as an offence under the Public Health Act. In the new Act (see Section 156, Sub-Section 8), it is an offence under the Factory Act, and the law agent of the Local Authority is empowered to take action under this Act.

(b) *Overcrowding (Section 2)*—A factory must not be overcrowded while work is carried on therein, and it shall be deemed to be overcrowded if there be less than 400 cubic feet of air space for each person employed in any room. Previously, 250 cubic feet with 400 during overtime employment was specified. This requirement of 400 cubic feet does not come into operation for five years in existing factories with the same occupier or his successor in the same business.

If during the five years' extension suitable mechanical ventilation is installed, a further five years' exemption from the 400 cubic feet standard is given unless the Medical Officer of Health requires the installation of mechanical ventilation before then and the occupier fails to instal it, in which case the exemption lapses.

The Secretary of State may demand an increased air space in any class or description of factory.

A further new provision is made in the measuring of workrooms—height over fourteen feet is not to be included in calculating the cubic space; and further, where there is a gallery in any

room it must be measured as a separate room. Unless the Medical Officer of Health otherwise allows, there must be posted in the workroom a notice specifying the number of persons who may be employed therein.

- (c) *Temperature*—The Local Authority must now ensure that provision is made for securing and maintaining a reasonable temperature in each workroom in a non-mechanical factory, whereas formerly the duty was assigned to the Factory Inspector. In the present Act, sixty degrees is fixed as a reasonable temperature, and anything less than 60 degrees will not be considered as satisfactory in a room where a substantial proportion of the work is done sitting and does not involve serious physical effort. One hour is allowed to bring the temperature up to this standard.

The means taken to secure and maintain the temperature must not be such as to permit the escape into the air of the room of any fumes injurious or offensive to the workers.

The Secretary of State is given power to modify the standard of temperature in any particular class of factory.

- (d) *Ventilation*—The section in the new Act dealing with the ventilation of workrooms is shorter and more emphatic than that in the old Act. Effective and suitable ventilation must be maintained *by the circulation of fresh air in each workroom*, and sufficient and suitable provision must be made for rendering harmless as far as practicable all fumes, dust, and other impurities that may be injurious to health generated in the course of any process or work carried on in the factory.

The Secretary of State may prescribe a standard of ventilation for factories of any class or description of factory or parts thereof.

Under the Factory Act, 1937, proceedings are to be taken not under the Public Health Act but under the Factory Act.

- (e) *Drainage of Floors*—Inadequate drainage of floors in workshops, formerly dealt with under the Public Health Acts as a nuisance, now falls to be dealt with under this 1937 Act.

- (f) *Provision of Sanitary Accommodation*—The new Act places the duty of enforcing the provision of sanitary accommodation on the Local Authority, and repeals Section 29 of the Public Health

Act, under which the owner could have been called upon to provide the accommodation. Now the occupier is responsible except where the factory forms only part of a building.

The Sanitary Accommodation Order, 1938, details the sanitary accommodation necessary.

Where it appears to the Secretary of State that in any factory cases of illness have occurred which he has reason to believe may be due to the nature of a process or other condition of work, etc., he may make regulations requiring medical supervision.

Part II deals with means of escape in case of fire and Part III with the source of drinking water, which must be certified as wholesome.

Underground Workrooms—In Part IV, Section 53 provides that no work shall be carried on in any underground room which is certified by the *Factory Inspector* to be unsuitable for the purpose as regards construction, height, light or ventilation, or on any hygienic grounds, or on the grounds that adequate means of escape in case of fire are not provided.

Bakehouses—No underground bakehouse (defined as "basement" bakehouse) can be used as a bakehouse unless so used at the date of the passing of the Act; and no underground or basement bakehouse which remains unused for more than twelve months can again be used as such. All basement bakehouses are, between July 1938, and July 1939, to be inspected and either re-certified as suitable for use as a bakehouse or have the certificate withdrawn, such inspection and procedure to be carried out every five years thereafter. Appeal to the Sheriff against the Local Authority's decision is permitted.

With regard to other bakehouses the provisions of the Factory and Workshops Act, 1901, Sections 97 to 101, forming the special sanitary regulations, now form part of the new Act and are to be enforced by the Local Authority.

Regulations and powers in respect of outworkers remain practically the same as in the 1901 Act.

Employment of Women after Childbirth—The Local Authority is now empowered to institute proceedings as well as exercise supervision as heretofore. Child welfare nurses are to report if a mother returns to work within four weeks of childbirth, so that proceedings may be instituted against the employer.

" *Tenement* " *Factories*—The owner, instead of the occupier, is responsible for any contravention of the Act relating to sanitary accommodation, while buildings and engineering works in course of construction are to be treated as factories and in respect of the provision of sanitary accommodation will be supervised by the officers of the Local Authority.

Details of the work involved in administering the Act of 1901 until 30th June and the Act of 1937 in the second half of the year are given in Table XXIII in the Appendix. The following details give some indication of the increase in the work of administration.

				1938	1937
Mechanical Bakehouses—					
Number on Register	...	...	...	245	211
Non-mechanical Bakehouses—					
Number on Register	...	...	...	253	306
Non-mechanical Factories—					
Number Registered	...	...	...	385	193
Number on Register	...	...	...	2,682	3,085
Number of Inspections	...	...	...	12,432	12,781
Mechanical Factories—					
Number Registered	...	...	...	4,136	—*
Number on Register	...	...	...	4,092	—*
Number of Inspections	...	...	...	4,163	—
Shops—					
Number of Inspections—		...	...	9,084	2,705
Offices—					
Number of Inspections	...	...	...	1,070	—

* Formerly administered by H.M. Inspector of Factories.

Fumigation of Vessels.—As most of the fumigations of vessels for disinfestation of rats are done with HCN. by contractors, the number done with sulphur by the Department is much reduced. Information regarding this matter is given in the report of the work of the Port Local Authority, which forms Section VII.

Disinfection of Second-hand Clothing, Etc.—Disinfection of second-hand clothing for export to Ireland, as required by the regulations issued by the Irish Free State, continued to a slightly decreased extent throughout the year. In all, 395 consignments were disinfected and certificates issued, the total amount received in respect of charges being £89 15s. 8d.

Disinfection of Straw Coverings.—In order to comply with the regulations of various countries, the arrangements for the disinfection and certification of straw coverings were continued during the year. No

additional names have been added to the list of those providing suitable chambers for this purpose, and the former arrangement whereby the Department is notified when a supply of packing is to be disinfected continued.

OFFENSIVE TRADES.

There were on the register of offensive trades in the city at 31st December, 70 businesses coming under this category.

Four businesses were removed from the register and five added during the year. Of the latter, four were brought into the city by the recent extension of boundaries.

The nature of the businesses is shown in the following statement :—

	1937	1938
Bone Boilers	8	7
Tallow melters	18	19
Manure manufacturers	8	7
Gut cleaners	3	4
Hide and skin factors	9	10
Soap boilers	9	9
Tanners	10	10
Glue and size manufacturers	2	1
Horse slaughterer	1	1
Knacker	1	1
Blood boiler	—	1
	<hr/> 69 <hr/>	<hr/> 70 <hr/>

DISINFECTION.

The following tables summarise the washings and disinfections carried out at Ruchill and Belvidere Disinfecting Stations during the year 1938 :—

	Belvidere.	Ruchill.	Total.
Number of washings	9,524	9,564	19,088
Average number per day	31·41	31·29	62·70
Articles washed and disinfected ...	306,713	358,928	665,641
Average number of articles per washing	32·2	37·5	34·8
Fuel consumed (tons)	577	482	1,059
Fuel used per article (lbs.)	4·23	3·02	3·41
Soap and powder used per article (ozs.)	0·24	0·22	0·24
Disinfectant " " "	0·67	0·57	0·61

*Number of Washings, Articles Disinfected, Etc., for
Years 1930-1938 Inclusive.*

		Washings	Articles	Sprayings	Whitewashings.
1930	...	16,996	617,675	12,222	17
1931	...	18,793	678,367	13,545	13
1932	...	22,183	806,360	15,248	12
1933	...	21,526	732,967	15,485	4
1934	...	19,738	654,224	13,760	2
1935	...	18,360	630,555	13,327	2
1936	...	17,859	627,461	11,852	1
1937	...	19,486	674,755	13,198	—
1938	...	19,088	665,641	12,457	2

Books disinfected, 1,602.

GENERAL SANITARY CONDITIONS.

The reports by the Divisional Sanitary Inspectors are included in this section; they deal with the work of the Department as given in detail in Table XXIII. of the Appendix, which contains tabulated particulars of inspections, nuisances, etc., in each municipal ward and for the city. References are made to the principal statistics for each division, and comments are made on the more important complaints or problems arising during the year.

CENTRAL DIVISION.

The year 1938 has been an outstanding one in several respects. The area of the Division has been increased by the extension of the City boundaries, while the work of the staff has been greatly increased by the Factories Act, 1937.

As a result of the Glasgow Boundaries Order, 1,217 acres have been added to the Division bringing the total to 7,042 acres. In the added area there are seven farms and a few small holdings. None of the farmers provide accommodation for seasonal workers; any extra labour is secured, as required, from adjacent villages and burghs. In three farms there are bothies occupied by workers, and byelaws have been framed for the regulation of these places. There are forty unfit houses in the area annexed, and these had Demolition Orders passed on them by the Dunbartonshire County Council who are finishing the construction of forty new houses to replace these unfit dwellings.

The introduction of the Factories Act will no doubt prove to be the outstanding event of the year. In the early days of Factory Legislation, Parliament refused to entrust administration to officials of local authorities. Later on, local officials were made responsible to a very limited degree, now in the 1937 Factory Act, local authority officials are entrusted with wide and important duties.

Each local authority must now keep a register of all factories within its area. In the Central Division there are 2,884 factories on the register, 1,687 mechanical and 1,197 non-mechanical. Under the new Act we have power of entry, for purposes of inspection, to every factory except to factories in occupation under the Crown. Great changes are made in the law relating to cleanliness in factories, to ventilation, and to the prevention of overcrowding. The inspectors are now responsible for enforcing the provisions relating to temperature in non-mechanical factories and the provisions relating to sanitary accommodation in all factories. It is this fact that makes it incumbent on the local authority to keep a register of all factories and under the Sanitary Accommodation Order, 1938, new requirements as to sanitary conveniences are such as to make it necessary to replan and reconstruct the accommodation in many factories. All this has entailed a considerable amount of extra work on the part of the inspectors.

Shops Act :—Since the passing of the Shops Act, 1934, and the survey which was carried out in 1935, attention has been directed to the provision of means for securing and maintaining a reasonable temperature in all shops. In 529 shops heating facilities have been introduced where previously none had been provided, and, during the year under review, special attention was paid to the maintaining of a reasonable temperature. Several difficulties have been experienced. During the cold spells thermometer readings were taken and where the thermometer indicated a temperature between 40 and 50 degrees intimation was sent to the occupier. One occupier naively expressed his surprise that the inspector should come on such a cold day with his thermometer. The difficulty of maintaining a reasonable temperature within a shop when the “open door” is insisted upon will be appreciated. In this connection one of the inspectors made observations and found that the fact of the door having to be opened by customers did not seem to interfere with business. The necessity for the open door may thus be exaggerated. I discussed this question with several of our multiple shop owners and it was agreed that in cold weather the shop girls should have liberty to close the door if this were necessary to maintain a reasonable temperature, and, as an alternative, an extra fitment—gas or electric radiator—should be kept and put into use during cold weather.

It is pleasant to be able to report that very few occupiers of shops offer any opposition to our requirements in this matter and the employees often express their appreciation of the comfort provided by the installation of heating appliances.

Offices :—The question of the sanitary condition of offices was raised by the Scottish Trades Union Council and in March of 1938 the Department of Health issued a circular on the subject reminding local authorities of their powers in this matter under the Public Health Act. The vast majority of the offices in Glasgow are in the centre of the city in Exchange and Blythswood Wards, and systematic inspection is made of office blocks in these areas, although individual offices are not visited unless there are reasonable grounds for believing that nuisance exists or complaints regarding alleged nuisance are received. During the year almost 300 notices were issued regarding insanitary conditions in such premises—office and warehouse blocks. These notices were issued under the Glasgow Police (Amendment) Act, 1890, and the Glasgow (Police) Order Confirmation Acts, 1904/1929, as the conditions were more readily dealt with under these local acts than under the Public Health (Scotland) Act, 1897. In some cases, however, action was taken under that Act. As there are no fixed standards regarding overcrowding, cleanliness, and the provision of sanitary conveniences and lavatory fitments in offices, it might be well to have regulations made regarding such matters on similar lines to those laid down for shops under the Shops Acts, 1912/1934, and for factories under the Factories Act, 1937.

General Nuisances :—In general nuisance work little of a special nature arose throughout the year. Drain traps are still the most prolific source of nuisance, over three thousand chokages being reported.

The failure of tenants to observe their rotation in the washing of stairs and closes is still too common. The remarks of the Stipendiary Magistrate, Mr. George Smith, on this point are worth recalling. When giving his decision in a recent case, Mr. Smith said :—

“ While the great majority of the citizens of Glasgow recognise and carry out conscientiously their duty under the byelaws, there are too many who are totally regardless of their obligations thereunder. And in saying so, I am not referring to the poorer tenants in tenement property, but rather to those people who live in flats in the better districts and who ought to know better. Such people ought to be compelled by the Authorities to recognise and to fulfil their obligations under the byelaws as to the sweeping and washing of stairs. It is to be regretted, I fear, that in this respect many people fail to regard their obligations of good citizenship.”

Considering the large number of complaints dealt with during the year (see Appendix), it is satisfactory to report that it was found necessary to take court proceedings in only twenty cases and in each case conviction was obtained. Fines ranging from 2/6d. to £1 were imposed. Of the twenty cases, sixteen were for failure to observe rotation under the Stair Cleansing Byelaws.

Two complaints of an unusual nature might be mentioned.

Several complaints were received from members of the public regarding alleged unhealthy conditions under which shop girls were employed in one of the large city warehouses during the Christmas season. The girls were employed to act as mermaids in a Grotto where an "under-the-sea" scene was staged. The mermaids' duty was simply to recline in what looked a comfortable position, but the complainers alleged that the atmosphere of the "grotto" was stifling. On inspection, it was found that there was little ground for complaint, but the manager was interviewed, a fan was installed, and, as the exhibit was only staged for the Christmas season, no further action was taken.

Complaints of smell nuisance were made by the Westerton Tenants Association to the Dunbartonshire County Council relating to smells emanating from a factory on the city side of the boundary. It was ascertained that the nuisance probably arose from the burning of scrap resinous sheeting in the incinerator and the throwing of incompletely burnt articles on to a dump in the yard which was visible from the Westerton area. The incinerating plant was inspected, when some ends of fabric and other materials manufactured in the works were seen to be burned. Most of the scrap consisted of laminated sheeting impregnated with synthetic resin. Two barrow loads were burned as a test and the odour could distinctly be detected in the Dunbartonshire area. It was doubtful if this could be dealt with as a nuisance, as the best practical means were being used to dispose of the material in the incinerator. If, however, this was burned in the yard a definite nuisance would undoubtedly be created. The investigation must have resulted in a more careful handling of the material as no further complaints have been received.

Rats :—There are 107 premises known to be or suspected to be rat infested and these premises are kept under observation. In preparation for the special week set apart for intensive rat destruction, the occupiers of these premises were circularised. The list is mostly made up of restaurants, bakehouses, provision stores, stables, piggeries, etc. In addition, 2,249 circulars were issued to occupiers of premises of a similar nature. In no case is the occupier quiescent on the subject and in many instances it is reported that the premises are now clear of vermin. During the specified week, thirteen complaints of rat infestation were received but in few of these were the complaints ascertained to be well founded. The fear of infestation, if a rat had been seen in the vicinity

of the premises, is frequently the cause of complaint. So far as could be ascertained, 229 rats were destroyed during the week but many more may have been destroyed through the agency of poison.

During the year many premises (thirty-seven within our knowledge), have been made rat proof. The special leaflet issued on "The Destruction of Rats and the Making of Buildings Rat Proof" has been revised and duly issued, and this has had beneficial results. Trouble is still caused through rat infestation of railway embankments, but in all cases the Company officials have co-operated in the destruction of the vermin by gassing, which seems to be very effective.

It has been found necessary to pay particular attention to unoccupied basement premises—tenements in which the basement houses have been closed under the Housing Act. When vermin get established there, they readily find their way into houses on the upper flats and it is essential to take steps to prevent this.

The practice of "bossing out" voids and recesses in business premises with plywood finishing provides runs and nesting places in premises which might otherwise be described as rat proof. In one case, a solid brick arch was found to be covered with plywood and the space left between the brickwork and the back of the plywood provided the necessary harbourage, so much so that the tenant terminated his tenancy. These voids and spaces behind ornamental finishings should be packed solid or the finishings should be fixed not more than half-an-inch from the wall.

During Rat Week one request was made that the inspector should call and "remove rats from the garden." On visiting the house, he was informed by the lady that she had seen a rat crossing the garden the previous day. Needless to say, the rats had anticipated their "removal."

Housing :—The number of houses represented during the year was 90, consisting of 15 of one-apartment, 57 of two-apartments and 18 of three-apartments, with a population of 298 persons.

The remaining properties in the Shaftesbury Lane Clearance Area have been demolished, which brings to an end a dispute between the owner and the local authority. After the Clearance Area was made, the Corporation rehoused the tenants, and, during the interval of three months between the vacating and the demolition of the properties, the owner, although warned against doing so, relet the houses to various families. Indeed, she put up a "To let" board on the properties with

this end in view. Subsequently, the local authority found other twenty-four occupiers in the houses from which they had rehoused the tenants. The owner was thereupon charged with reletting the houses knowing that a Clearance Order had been made against them, and, on being found guilty, was fined £5.

The increase in the number of houses of one-apartment and two-apartments in Kelvinside during recent years is interesting in view of Section III of the Housing (Scotland) Act, 1925, which forbids the erection of houses of less than three-apartments save in exceptional circumstances. An inspection of the Valuation Roll for the year 1929 shows 14 houses of one-apartment in the ward, while in the year 1938 the number has risen to 1,108. Similarly, the number of two-apartment houses has increased from 94 in the year 1929 to 538 in the year 1938. This large increase is due entirely to the breaking up of large houses into service rooms. To a lesser degree, this has also taken place in Park Ward and, in some cases, in the older wards in the centre of the city. In the majority of cases the rooms are let to single persons or husband and wife, but, in the poorer type, families have been accommodated in one room, with the result that overcrowding and pressure on the existing sanitary arrangements have taken place. It is ineffective to order the overcrowding to be abated as this merely throws the family on the street without any chance of them securing a house; in fact, it is almost impossible for these people to become tenants of a house owing to the absence of a rent book from a previous factor. On the other hand, they are usually unable to afford the extra apartment which would abate the overcrowding. The only remedy apparent is the provision of more houses.

Rehousing Schemes :—The Nurse Inspector reports as follows on the Rehousing Schemes in the Division.

In the *Fulton Street Scheme*, 120 houses have been occupied for the first time this year. Of these, 106 have attained the standard of "Clean" and 14 "Fair"; two have been evicted and one has left voluntarily. The total number of houses occupied in the Scheme at 31/12/38 was 284; of these 276 were "Clean" and the remaining eight were "Fair", none having come down so far in the scale as to be classed as "Dirty." The most apparent fault of the tenants in this Scheme seems to be their overindulgence in articles obtained by the hire-purchase system, such as electric vacuum cleaners and electric washing machines, the latter especially, seemingly superfluous, as each house has a perfectly good gas wash-boiler.

In the *Scotstoun Scheme*, the total number of houses (96) were occupied at 31/12/38. All of them were classed as "Clean," two of them coming up the scale from "Fair" to "Clean" since 1937. Only two evictions took place during the year, 10 tenants removed voluntarily, seven of whom were transfers to Intermediate Schemes, requests for transfers coming from the tenants themselves, who are now in better circumstances financially and able to pay higher rents. Two of the tenants obtaining entry during the year were by transfer from other schemes.

The *Whiteinch Scheme* has also 100 per cent. "Clean," 66 tenants being in occupation and all obtaining the high standard of "Clean." Of these, two have graduated from the "Fair" class and three have removed voluntarily, including one transfer to an Intermediate Scheme.

In the *Yorkhill Scheme*, all the houses were occupied at 31/12/38. Of these, 80 were "Clean" and four "Fair," being a fall of one from "Clean" to "Fair" during the year. There were three voluntary removals, two being transfers to larger houses.

In the *Clydeferry Scheme*, which consists of 30 houses, 27 were classed as "Clean" and three as "Fair," being a slight improvement on last year of one "Dirty" to "Fair." In the small scheme of *Cheapside*, consisting of 18 houses, all the houses were "Clean."

The *Scotstoun*, *Whiteinch* and *Yorkhill* Schemes are still at a disadvantage in that they have no wash-boilers in their sculleries and so have to use the Public Wash-houses or take the clothes which require boiling to the houses of their more fortunate relatives.

Bug Infestation in Scheme Houses :—In each of the Schemes—Fulton Street, Whiteinch, Clydeferry and Cheapside—one case of serious infestation took place and was treated by the City Improvements Department, while in the Scotstoun and Yorkhill Schemes there was "No Evidence Found" throughout the year. In none of the Schemes mentioned were there any cases of houses where bugs had recurred within the year, which is very satisfactory and does credit to the treatment carried out by the City Improvements Department and to the tenants in co-operating in carrying out the advice given to prevent a recurrence.

A very good arrangement exists between the City Improvements Department and the Public Health Department. Whenever a house is vacated, the factor of the Scheme notifies the Nurse Inspector and the

empty house is examined, using Dr. Gunn's special diagnostic spray. If any trace of bugs is found, the house is treated by the City Improvements Department. In any case, the house is not re-let until the "No Evidence Found" report regarding bugs is given by the Nurse Inspector.

Before tenants are rehoused in any of the Scheme houses, their furniture, etc., is inspected and they are instructed how to carry out a thorough cleansing, with emphasis on Soap, Water and Elbow Grease. Very few tenants ever think of taking out the drawers and cleaning behind them, or cleaning the backs of the furniture, or the underside of chairs. Where bugs or any traces of bugs have been found, the contents of the house are inspected the day before removal, and arrangements made for disinfection on day of removal. Bed and bedding may be treated at one of the hospital wash-houses and the furniture sprayed. It is very doubtful if this spraying is at all effective, so special emphasis is laid on the thorough cleansing of all furniture with soap and water as being the most effective procedure.

House to House Visitation is still carried out, but on a much smaller scale than previously. With the rehousing of tenants, the houses suitable for these visitations are becoming fewer every year. In the course of these and "House after School" visitations, houses may be found dirty or with bedding in an unsatisfactory condition, but usually a verbal warning to the householder is sufficient to have the necessary cleansing carried out.

Visits to the Schools are made for the purpose of examining children suspected of being verminous or dirty. The cases of serious infestation are few, the majority of infected cases consisting of nits in the hair, and it is probably the repeated visits to the houses with advice to the parents or guardians that prevent the children getting into a more serious condition.

The Visitation of Pneumonia Cases of children under the age of four years by the Nurse Inspector curtails considerably the time usually allotted to other work. It is desirable to have at least four routine visits in the year to Scheme houses, but this is not always possible, and visits to the Schools invariably get behind during the "Pneumonia Season" since Pneumonia Visits were allocated to us.

W. ROY,
Divisional Sanitary Inspector.

NORTHERN DIVISION.

The Glasgow Boundaries Order Confirmation Act, 1937, which took effect as from 15th May, 1938, added an area of 4,793 acres and a population of 1,267—exclusive of institutional population—to the Division. The appended statement shows the distribution of the acreage over the various wards affected by the extension, and other matters of interest to this Department.

	Ward 8 Provan	Ward 10 Springburn	Ward 19 Ruchill	Ward 21 Maryhill	Totals
Acreage	1,642	1,993	339	819	4,793
Number of Houses ...	125	169	7	38	339
Population	510	590	24	143	1,267
Number of Farms ...	10	8	1	5	24
Number of Small-Holdings	13	—	—	9	22
Number of Piggeries ...	10	3	—	5	18
Number of houses without inside water supply ...	44	3	—	1	48
Number of Water-Closets	61	139	7	27	234
Number of Dry Privies ...	33	23	—	6	62

The area is sparsely populated and will no doubt provide sites for future housing schemes. Meantime lack of proper sewerage facilities raises difficult problems in drainage, especially where piggeries are concerned. Approximately fifty of the dwelling-houses are regarded as unfit for human habitation.

Gartloch Asylum is the largest institution in the new area, and Provan Hall, which is now in Springburn Ward, is an addition to the list of historical places in the Division which includes among others the Cathedral and Provand's Lordship.

Nuisances:—The number of nuisances and other matters dealt with was 11,775, a total which is not materially different from that of previous years. Details will be found in the appended tables. In the great majority of cases nuisances were abated without undue delay, and in only one instance was it necessary to institute Court proceedings.

The most noteworthy nuisance that called for attention was a chokage of drainage which for some time affected a terrace of houses and an important institution in Woodside Ward. The chokage was caused by a collapse of the private sewer serving the area, but this was discovered only after protracted excavation work had been carried out and serious inconvenience caused to the occupiers of the premises concerned.

Drainage :—An increased number of linings granted by the Dean of Guild Court in connection with new buildings and alterations of existing buildings entailed an increase in the number of tests applied to drainage. Certificates issued to the Master of Works in terms of Section 97 of the Streets, Sewers and Buildings Act regarding premises built or altered by private owners numbered 40, while 41 had reference to the housing schemes of the Local Authority.

Important buildings in course of erection and not completed by the end of the year included two churches, a large extension to the Royal Infirmary, a Nurses' Home at Gartloch Asylum, a reconstruction of Woodside Baths, a fire station, and a large office and warehouse block at Port Dundas for the Distillers Company, Limited.

Houses to the number of 767 in various housing schemes were completed, and only nine houses were erected by private owners.

Slum Clearance :—The number of houses represented for demolition orders in terms of Section 16 of the 1930 Housing Act was 92, and by the end of the year 62 of these had been demolished, 9 were closed, and 21 were still in occupation. In addition to these, 355 houses dealt with by Housing Act procedure in 1937 were demolished and 36 were closed. Lack of alternative accommodation prevents action under the Housing Acts against many houses in the Division which are regarded as uninhabitable.

Rent and Mortgage Interest Restriction Acts :—Only six applications for certificates were received, and of these, two were granted and four refused.

Decrowding :—During the year, 729 houses were decrowded under the provisions of the 1935 Housing Act, and of that number 611 are privately owned and 118 owned by the Local Authority. The number of persons whose housing conditions were improved as a result of this action was 4,367. The following tables show the number and size of the decrowded houses and particulars regarding the extent to which they became overcrowded by the incoming tenants, etc.

TABLE I.

LOCAL AUTHORITY HOUSES DECROWDED.

Number and Size of Decrowded Houses.		Number of Persons prior to Decrowding.	Number of Persons after Houses were Re-occupied.
82 of 2-apartments	...	472	199
34 of 3-apartments	...	243	135
2 of 4-apartments	...	22	14
<hr/> 118		<hr/> 737	<hr/> 348

In only two of these houses was the permitted number exceeded by the incoming tenants, and in both cases the degree of overcrowding was not serious. As will be observed, the number of persons in the families who became tenants of the decrowded houses was less than half the number in the families who formerly occupied them.

TABLE II.
PRIVATELY OWNED HOUSES DECROWDED.

Number and Size of Decrowded Houses.	Number of the Houses which are not now Overcrowded.	Number of Decrowded Houses which were Overcrowded by Incoming Tenants.			Number of Persons prior to De-crowding.	Number of Persons after Houses were Re-occupied.
		Over- crowding Reduced.	Over- crowding Unchanged.	Over- crowding Increased.		
137 of 1-apartment	115	20	1	1	690	288
428 of 2-apartments	369	43	4	12	2,595	1,260
46 of 3-apartments	41	4	1	—	345	181
611	525	67	6	13	3,630	1,729
	85.9%	10.9%	1%	2.1%	Average =5.9 per House	Average =2.8 per House

In these houses also, decrowding resulted in more than 50 per cent. of a reduction in the number of persons occupying them.

The application of the measurement standard reduced the permitted number only very slightly—in 16 instances by one-half of a unit and in two by two units. The latter were three-apartment houses with small rooms. It is of interest to note that of the 729 families included in the foregoing tables who became occupants of the decrowded houses, 436 (60 per cent.) came from other houses within the city, 220 (30 per cent.) were newly-married couples, 58 (8 per cent.) came from lodgings, and 15 (2 per cent.) were families from outwith the city. The whole of the families referred to were rehoused by the Local Authority.

Overcrowding :—Scarcity of houses appears to be as acute as ever, and with a view to ascertaining the extent and the degree of overcrowding in small houses, the information set out in the following tables was recently obtained. In Table I comparison is made of the number of persons who occupied certain houses in the year 1931 with the number in 1938. The houses, which are of one apartment and two apartments, are of the uninhabitable type and are included in areas marked out for Clearance Area procedure.

TABLE I.
OVERCROWDING IN 1,794 UNFIT HOUSES.

Year.	Number and Size of Houses.	Number and Percentage Overcrowded.	Number of Units in Excess.							
			$\frac{1}{2}$	1	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4 and Over
1931	898 of 1-apartment	486 54%	112	147	71	45	30	27	13	19
1938	Do.	495 55%	123	137	72	63	47	32	11	20
1931	896 of 2-apartments	521 58%	70	108	57	91	45	50	22	78
1938	Do.	492 55%	70	115	58	82	35	49	26	57

In the year 1931, twenty-two of the one-apartment houses were overcrowded owing only to the sex-separation factor, while in 1938 there were ten. As the percentage of overcrowded unfit houses for the whole city, as revealed by the 1935 survey, was 53.5, there is little satisfaction to be found in the above statement. It is to be observed, however, that in a large number of the houses the excess is not more than one unit; the degree of overcrowding in these houses is, therefore, not serious.

Table II contains corresponding information with regard to 2,130 houses of two apartments and three apartments in rehousing schemes

TABLE II.
OVERCROWDING IN 2,130 HOUSES IN REHOUSING SCHEMES.

Year.	Number and Size of Houses.	Number and Percentage Overcrowded.	Number of Units in Excess.							
			$\frac{1}{2}$	1	$1\frac{1}{2}$	2	$2\frac{1}{2}$	3	$3\frac{1}{2}$	4 and Over
1931	1,273 of 2-apartments	628 49.4%	153	199	92	86	44	30	10	14
1938	Do.	479 37.6%	91	140	57	74	28	39	18	32
1931	857 of 3-apartments	468 54.6%	91	118	69	61	44	32	25	28
1938	Do.	481 56%	73	102	73	74	49	50	23	37

The houses included in the above table are comprised in five of the longest-established schemes, and this accounts for the high proportion of two-apartment houses. In the more recent schemes a certain number of four-apartment houses have been included and the wisdom of continuing that policy is apparent in view of the extensive overcrowding indicated above in both the two-apartment and the three-apartment houses.

Only another survey of the whole city would reveal the present position with regard to overcrowding generally, but there are indications that in spite of the decrowding operations carried out it has not decreased to any material extent since 1935, and that the "appointed day" is still a very long way ahead.

Factories Act, 1937:—The new Act, which took effect as from 1st July, 1938, laid additional responsibilities on Local Authorities. They are now charged with the duty of supervising the sanitary accommodation in factories in which mechanical power is employed—a duty formerly undertaken by Government Inspectors. In this Division there are 718 such factories. The whole of these had not been inspected by the end of the year, but already improvement of the conditions in many factories can be reported. Opportunity is taken to recommend the abolition of antiquated and objectionable sanitary conveniences and the substitution of water-closets of a modern type, and in some instances this improvement has been effected. Defects discovered included insufficiency of water-closet accommodation, defective ventilation of compartments, intervening spaces unventilated, compartments without proper doors and fastenings, conveniences in a dirty condition, etc. Eighty-two notices requiring rectification of such conditions were issued to occupiers, and these are being complied with.

Non-mechanical factories number 432, and the general sanitary condition of these had attention. Inspections of the offices for the clerical staffs employed in connection with factories were also made. One of the most interesting factories is that of the Royal Glasgow Asylum for the Blind. The premises, which are situated in Possilpark and consist of a handsome building of six storeys, were completed last year and are the largest and most up-to-date industrial workshops for the Blind in Great Britain. Work is carried on in spacious, airy, and well-lighted flats, and canteens and rest-rooms have been provided. Employment is found for over 400 trained workers and 70 trainees, and the work carried on consists of the making of baskets, brushes, bedding, chairs, mats, wire mattresses, etc. The dexterity displayed by these blind workers is wonderful, and a visit to the factory is full of interest.

Bakehouses:—Of the 87 bakehouses in the Division, eight are what are now known as basement bakehouses. After the passing of the 1901 Factory Act, 28 such bakehouses were certified as being fit for continued use as bakehouses. Since then they have, for various reasons, decreased in number, till now there remain only the eight referred to above, and of these, two are not in occupation and are not likely to be occupied again.

While there has been a gradual disappearance of basement bakehouses, there has been, especially within recent years, a large increase of what are known as "Home Bakeries." These usually consist of a front shop with a back apartment in which scones, pastry, etc., are baked. In some instances the premises are not well adapted for the purpose, and it would seem to be desirable that the sanction of the Local Authority should be required before premises to be used as bakehouses are occupied.

The provision of ample sanitary accommodation in bakehouses is of the utmost importance, and recognition of that is found in one of the largest and best equipped bakeries in the Division. In this establishment about 550 workers, male and female, are employed, and the sanitary accommodation consists of 40 water-closets, 11 urinals, 55 basins, 12 foot-baths, and 6 shower-baths.

Shops Act, 1934 :—Action in terms of the Act was taken with regard to the provision of means to maintain a reasonable temperature in shops. In 236 instances occupiers were notified of the lack of sufficient means of heating, and comparatively few shops are now without some form of heating appliance. Other matters that had attention were insufficient water-closet accommodation, sanitary fittings defective, and premises in a dirty condition.

Rat Destruction :—As in former years, circulars were issued immediately prior to Rat Week to owners and occupiers of premises suspected to be rat-infested, drawing attention to the provisions of the Rats and Mice (Destruction) Act.

Special measures were taken in connection with a piggery which was known to be seriously infested. This piggery was closed down after having been in occupation for many years, and there was a danger that the cutting off of the usual food supply might result in a migration of rats to other premises in the vicinity. Intensive action by means of trapping and poisoning was therefore taken and many rats accounted for, with the result that the threatened danger was averted. In no case was complaint made that rats had found access to other premises in the neighbourhood.

Piggeries :—There are now 33 piggeries in the Division with accommodation for over 7,000 pigs. Several of those in the added area are extensive premises, and the largest is licensed for the keeping of 1,500 pigs. In some instances the piggeries in the new area fall short of the standard laid down in the bye-laws, and in the matter of drainage particularly some latitude has had to be given.

Rag Flock Act :—Five samples of rag flock were taken during the year, and of these, two were found not to conform to standard. The flock from which the samples were taken was bought under warranty, and in view of the difficulty, in the circumstances, of successfully carrying through a prosecution under the Act, legal proceedings were not taken.

Common Lodging Houses :—These continued to be well kept, and apart from some minor irregularities, the terms of the bye-laws were adhered to.

Rehousing Schemes :—The number of houses under supervision was 6,435, an increase of 362 since last year. The houses, which are distributed over 28 separate schemes, are supervised by six nurse inspectors. In the great majority of cases the reaction of the tenants to the new housing conditions has been gratifying, and the manner in which the houses were kept is detailed elsewhere in this report. Visits to the schemes were made from time to time during the year by Miss M'Michael of the Department of Health.

Verminous Children :—Examination of school children suspected to be verminous or dirty was continued as in former years. Two hundred and sixty-nine visits to schools were made and 4,146 children were submitted for examination. Of that number, 1,450 (35 per cent.) were found to be in some degree verminous, while 154 were dirty. Representations to the parents or guardians of these neglected children were effectual in securing the required cleansing. The home conditions of the children were also enquired into and, where necessary, steps taken to effect improvement.

Sanitary Conveniences :—As a consequence of slum clearance operations in past years, the number of dry privies in connection with dwelling-houses, and the number of houses without inside sinks and water supply have been gradually decreasing, but an increase in the numbers occurs this year as a result of the extension of boundaries.

With reference to the number of water-closets used in common, it should be noted that sub-let rooms which are in some cases entered in the Valuation Roll as separate houses are not so regarded in the figures given below.

Water-closets used in common by two or more tenants number 9,597. Of these, 1,885 serve two tenants, 5,454 serve three, 1,904 serve four, and 354 serve five or more.

Twenty houses of one apartment, 68 of two apartments, and 15 of three apartments are without inside sinks and water supply, and 129 dry closets serve the occupants of 181 houses.

There are 458 ashpits, 40 of which serve one tenant, 5 serve two, 11 serve three, 5 serve four, and 397 serve five or more.

The number of houses with baths is 23,720 or approximately 34 per cent.

General :—Other work such as the regulation of stair cleansing, the enforcement of the provisions of the Police Acts with regard to the painting and whitewashing of staircases, the inspection of water storage cisterns, the supervision of offensive trades, etc., does not call for special comment.

J. H. PATTERSON,
Divisional Sanitary Inspector.

EASTERN DIVISION.

The various types of nuisances dealt with are recorded in the Appendix Table. Compared with previous years there is little difference in their nature and number, but those dealing with rat-infested premises are increasing year by year. The cause for this increase is no doubt due to the literature distributed during "Rat Week," which as an annual event has stimulated the citizens to greater efforts for the removal of vermin from their premises. The remedial measures taken in the majority of the complaints of rat-infestations have been successful, but in a few where the houses are very old, little can be done short of their demolition, and that procedure will ultimately be adopted.

A most unusual nuisance caused by smells in a public school calls for special comment. The smells resembled sulphuretted hydrogen and were experienced in two ground floor classrooms. The scholars were immediately removed to other quarters to permit of a thorough investigation. The floors were lifted to examine the under-floor space, when it was found that the site was paved with asphalt and that slag had been used as a bottoming material. On the surface of the asphalt there appeared small blisters which, when punctured, exuded a liquid smelling like sulphuretted hydrogen. A quantity of this liquid was sent to the City Analyst, who reported that it contained approximately two per cent. of calcium poly-sulphide, a substance which will liberate sulphuretted hydrogen even by the action of carbonic acid of the air. Reporting on the slag, a quantity of which was also submitted for

analysis, the City Analyst stated that although it was apparently dry it was found on fracture to be saturated with an evil-smelling liquid which also gave strong reactions for the presence of sulphide. The Analyst concluded his report by stating that slag contains appreciable amounts of sulphides, and in his opinion the probability was that at some time this layer of slag had been in contact with moisture, resulting in the formation of calcium sulphides which gave rise to the formation of sulphuretted hydrogen which, no doubt, was the cause of the complaints regarding bad odours.

In view of the Analyst's report, a further investigation was made to find out if there was a possibility of unused drains from the neighbourhood of the school being connected to the public sewer as these might have been the means of conveying the necessary moisture to the slag and asphalt for the formation of sulphuretted hydrogen. The investigation disclosed the fact that several old unused drains were connected with the public sewer, and that these drains were untrapped and one at least terminated under one of the classrooms affected with the bad odours. The unused drains were entirely removed and their connections with the public sewer sealed. Since that was done, the smells have entirely disappeared.

It has long been the practice to seal off from the public sewers all unused drains, but those above referred to seem to have existed prior to the erection of the school, which was about the year 1878. The experience related, however, shows the necessity for the removal of all unused drains and the sealing of their connections to public sewers.

The recent extension of the city added an area of 412 acres to the Shettleston and Tollcross Ward, and within the area there are 112 dwelling-houses, one of which was in such a state of dilapidation and unfitness that immediate action had to be taken for its demolition. Some of the houses are situated where there are no sewers, and consequently pan privies are in use instead of water-closets. As the area is likely to be developed for housing purposes, the privies will ultimately disappear.

Offensive Trades :—Three businesses, consisting of a blood boiler, tallow melter, and gut cleaner, were added to the number of offensive trades as the result of the recent extension of the city boundary. These businesses were sanctioned by the County Council of Lanarkshire and have been in existence for many years. The tallow melting and gut cleaning businesses are conducted within the same premises, while another firm carry on the blood boiling.

Three offensive trades, consisting of a bone boiler, manure manufacturer, and a tallow melter, which were all carried on within the same premises, were removed from the register as the result of the premises being destroyed by fire, and as the owners failed to resume business for a period of over 12 months, the sanction originally given by the Local Authority lapsed. Section 32 (6) of the Public Health (Scotland) Act provides, *inter alia*, if an offensive trade is renewed on the same set of premises after having been discontinued for a period of 12 months or upwards, it shall be deemed to be a newly established business and sanction of the Local Authority must therefore be obtained to establish. In this particular case the premises were let to a motor car demolisher.

There is a general desire on the part of those engaged in tallow melting and bone boiling to adopt the best known means for the destruction of effluvia arising from the manufacturing processes of their business and advantage has been taken to advocate the adoption of condensing and chlorinating plants where it is practicable to do so, with the result that six establishments have now provided these plants at a considerable cost. There is no doubt that this form of treatment effectively destroys effluvia arising from the boiling process. There are, however, other sources from which odours may arise, such as the habit manufacturers have of withdrawing steaming bones or cracknels from digesters. It is true that these residual products cool quickly, but when a number of bone boilers are situated in a small area like Vinegarhill, the collective odours on occasions from this source can be sensed in the atmosphere. Several manufacturers have been warned to avoid the withdrawal of steaming bones, etc., from their digesters, and a fairly good response has been given to the warnings.

At the end of the year there were 44 offensive trades on the register, and these consisted of 5 bone boilers, 4 gut cleaners, 1 glue and size maker, 3 hide and skin factors, 4 manure manufacturers, 4 soap boilers, 14 tallow melters, 8 tanners, and 1 blood boiler.

Thirty-nine notices were issued for contraventions of the bye-laws, and all of these were attended to.

Common Lodging Houses :—There are 9 common lodging houses, of which 6 are for males and 3 are for females. No serious contraventions of the bye-laws were observed, and all the houses were well conducted. The beds in the majority of these houses are either of the open type or situated in small cubicles, but in two of the houses for males there was

at the beginning of the year a small number of bunk beds, *i.e.*, one bed above the other although in separate cubicles. This is a most objectionable form of arranging beds in lodging houses, as the lower berth is as a rule a very dark place and can seldom be properly ventilated. The walls of the cubicle, together with the upper berth, exclude natural lighting and good ventilation, and make inspection of the bedding and structure very difficult, particularly if the officer is looking for vermin. Early in the year the owners of one lodging house containing 296 beds, of which 63 were of the bunk type, had the latter removed and fitted up in lieu thereof open beds within cubicles. This very desirable operation reduced the total number of beds by 24 to 272, and it is hoped that in the near future the remaining lodging house with bunk beds will take steps to have them removed.

In 7 houses, hot plates are provided for the lodgers to cook their food on, and in 2 there are no such facilities. The keepers of the latter two houses have a staff of cooks who provide meals at a cheap rate, and these houses are very popular with those who patronise them. There is the absence of the varied cooking smells experienced from the common hot plate where each individual cooks his or her own meals, and it would add considerably to the hygienic conditions if lodging house keepers would consider the abolition of hot plates and individual cooking and substitute therefor a restaurant kitchen where prepared meals could be supplied cheaply.

An infestation of beetles in one house necessitated the removal and replacement of a number of lockers used by lodgers for personal belongings. The remedial measures taken for the infestation were successful.

The accommodation was not fully occupied by lodgers in any of the houses during the year.

Housing :—The number of houses represented as being uninhabitable was 176. Demolition Orders were made on 129 of these and Closing Orders on 31. The remaining 16 are still under consideration. Of the 129 houses on which Demolition Orders have been made, 57 have now been demolished; 36 have been closed and are awaiting demolition; and 36 are still occupied. Of the 31 houses on which Closing Orders have been made, 8 have been demolished voluntarily by the owners; 19 have been closed; and the remaining 4 are still occupied.

One hundred and sixty-one houses were inspected in terms of the Inspection of District Regulations, and of these, 33 were found to be unfit for human habitation and were subsequently dealt with by Demolition Orders. Repairs where these were necessary were carried out in the remaining houses. The number of houses inspected under these Regulations since the year 1931 is 7,074, and of that number, 4,923 were uninhabitable. The majority of these have now been closed or demolished.

When the general survey for overcrowding was carried out in 1935, 19,478 fit houses of five-apartments or under were found to be overcrowded. Of that number, 5,017 were one-apartments; 11,275 were two-apartments; 2,908 were three-apartments; 269 were four-apartments; and 9 were five-apartments. The number of houses decrowded since the survey mentioned above was made is 1,091, and of that number, 900 are privately owned and 191 belong to the Local Authority. Two hundred and eight-two of the decrowded houses have again become overcrowded, and of these, 269 are privately owned and 13 are owned by the Local Authority. As one would expect, overcrowding was more extensive in the single and two-apartment houses, and the decrowding of these smaller houses has been relatively greater than in houses of three-apartments and upwards. The small number of overcrowded houses that have been decrowded is indicative of the shortage of houses for the abatement of overcrowding.

The number of houses measured for the purposes of the Housing (Scotland) Act, 1935, is 11,026, consisting of 2,105 single-apartments, 6,577 two-apartments, 2,121 three-apartments, 222 four-apartments, and 1 of six apartments.

No houses were built by private owners. Two hundred and forty-eight new houses were completed by the Corporation, consisting of 127 three-apartment, 119 four-apartment, and 2 five-apartment houses. Seven houses were reconstructed, involving 5 two-apartments, 1 four-apartments, and 1 single-apartment. These were made into 1 two-apartment, 2 three-apartment, and 1 four-apartment houses with bathrooms and the usual sanitary fittings.

Water Supply:—Eight hundred and ninety-two inspections were made of water storage cisterns, and 234 which were found dirty or improperly covered were cleansed and recovered by the owners after their attention had been called to the matter. Thirty-nine defective supply pipes which prevented tenants from obtaining an adequate supply

of water were repaired, and the Water Engineer was notified of other defects in fittings from which water was running to waste at 382 properties.

Drainage :—The number of visits paid in connection with the drainage of old and new buildings was 7,413, and the smoke-test was applied on 534 occasions. There were many consultations with builders and architects regarding the lay-out of drainage and plumbing systems. Apart from dwelling-houses, the largest buildings erected during the year were Messrs. Templeton & Company's at Glasgow Green and Fordneuk Street. The Glasgow Green premises, which consist of six flats, are provided with 24 water-closets, 24 washhand basins, and six drinking fountains. The Fordneuk Street premises are of four flats and are fitted with 15 water-closets, 15 washhand basins, one stall urinal, and four drinking fountains.

Thirteen shops and small business premises for which there was no water-closet accommodation were each provided with such a convenience, and in two factories trough water-closets with 14 seats were removed and modern washdown closets fitted in lieu thereof.

Shops Acts :—The number of visits paid to shops under the 1934 Act was 603, and 137 notices were issued principally to provide and maintain suitable means of heating.

Sanitary Conveniences used in Common :—Water-closets serving two, three, four, and five or more tenants numbered 1,139, 5,981, 1,536, and 215 respectively, a total of 8,871 as compared with 8,943 in the previous year, which is a reduction of 72. Houses without an inside sink and water supply number 52, a decrease of 16 from last year. The number of dry closets and privy middens has been increased by six, making now a total of seven. The increase is due to the recent extension of the city boundary which brought within the city a few old isolated houses far removed from a public sewer. Ashpits used in common show a decrease of 94; there are 65 in all compared with 159 in the previous year. The number of houses provided with baths is now 16,149, an increase of 499 since 1937.

Factories Act, 1937 :—With the coming into force of this Act, the duties of the Local Authority have increased, as many of its provisions which formerly were dealt with by the Factory Inspector have now been transferred to the Local Authority.

The number of visits paid to factories was 2,541, and the number of notices issued was 329. A large number of these notices referred to the provision of intervening ventilated spaces between sanitary conveniences and workrooms. Twenty-eight bakehouses were found dirty as the result of the limewashing or cleansing of the walls and ceilings being overdue, but after notices had been issued, the necessary cleansing was carried out.

Cemeteries :—The cemeteries have been regularly inspected and no serious contraventions of the bye-laws were discovered. There are two large cemeteries in which interments regularly take place. These are very well kept. The others are practically closed, and occasionally it has been necessary to ask for the removal of litter such as papers, etc., deposited by careless visitors.

Tents and Vans :—Two applications were made for the renewal of permission granted in 1937 to use vans for human habitation. In each case it was for one van, and the Local Authority renewed their permission for another year. The ground at 843 Gallowgate, which for many years has been used as a parking place for travelling showmen's vans, was well patronised during the year. The ground is admirably suited for this purpose, being in charge of a caretaker and being provided with separate water-closets for the use of each sex. There is accommodation for about 78 habitable vans. The average number of persons in each van was three. In many cases van dwellers have had to use more than one living van to avoid overcrowding. At the end of the year there were 69 inhabited vans, occupied by 39 families. Seven families each occupied three vans; sixteen families each occupied two vans; and sixteen families each occupied one van. The total population accommodated in the vans was 129.

Limewashing and Painting of Staircases, &c. :—A systematic inspection is made of all tenement property in the Division, and a record is kept of all the work done in this connection. During the year under review, 1,820 notices were issued to paint and limewash or to limewash and cleanse close and staircase walls of dwelling-house properties. All the notices issued have been complied with.

General :—There is nothing particular to report on any of the other activities of the Department, particulars of which can be had from the Appendix Table headed "Operations of Sanitary Section."

A. STIRLING,
Divisional Sanitary Inspector.

SOUTH-EASTERN DIVISION.

By the passing of the Glasgow Boundaries Order Confirmation Act, 1937, which came into operation on 15th May, 1938, a considerable addition—3,099 acres—has been made to the area of this Division. This is almost one third of the total area added to the city and brings the acreage of the Division up to 8,200. At farms in the added area there are 19 houses—10 of two-apartments and 9 of three-apartments—and 9 bothies, occupied by 85 agricultural workers. In addition, two agricultural workers are accommodated in apartments in farmhouses. Only a few seasonal workers are employed but they are not accommodated at the farms, as they are recruited from the city population and, having homes of their own, prefer to travel daily to their work. In the area there are also 196 private houses ranging from one to ten apartments with a population of 821.

Nuisances :—9,828 nuisances were discovered and removed during the year. While these, as usual, varied in type, none calls for special mention.

With regard to the complaints of smells which were being experienced last year in a number of houses in the Shawlands district, the efforts to trace the source of which were detailed at some length in last Annual Report, it is satisfactory to be able to report that early this year the smells ceased to be experienced and have not recurred. It is rather disappointing, however, not to be able to account definitely for the smells. The probability is that the digging of the ground immediately outside the houses in an effort to trace the source and the subsequent filling in and consolidating of the ground may have diverted the gas or gases which were believed to be the cause, and these may now be escaping in the open air and will be imperceptible owing to the small traces of gas involved.

Housing :—Fifty-nine houses were represented as being uninhabitable, and Demolition Orders were made on 38 of these and Closing Orders on 21. The tenants of the 38 houses on which Demolition Orders were made having been rehoused, 21 of the houses have been demolished and the remaining 17 are now in course of demolition. Of the 21 houses on which Closing Orders were made, two are still occupied, two have been demolished voluntarily by the owners, and 17 have been closed.

Of the 67 houses represented as unfit during the year 1937 and still under consideration at the beginning of this year, Demolition Orders were subsequently made on 62 and Closing Orders on 5. These have all

now been demolished, the owners of those on which Closing Orders had been made having decided voluntarily on demolition. The 23 houses awaiting demolition at the end of last year have now been demolished, as have also the 19 houses which were still in occupation at the end of that year, the tenants having been rehoused. The tenants of two houses which were the subjects of Closing Orders last year have also now been rehoused, and both houses are closed.

When the Glasgow Boundaries Order Confirmation Act, 1937, came into force, it was found that on a row of nine houses within the area added to the city Demolition Orders had been made by the County of Renfrew Authorities and three of these houses were still occupied. Two of the tenants of these latter houses have now been rehoused and the remaining house is still in occupation.

Inspection of District Regulations:—Four hundred and sixty-seven houses were inspected during the year, and 79 of these were considered to be unfit and were added to the list of unfit houses for future action. The remaining 388 houses were found to be reasonably fit for human habitation.

Overcrowding:—Five hundred and thirty-seven families, consisting of 3,320 persons, living in overcrowded conditions were rehoused. A subsequent survey of the vacated houses showed that 20 were still unoccupied. Of the remainder, 423 had not again become overcrowded, and in 69 the overcrowding had been reduced—12 by a $\frac{1}{2}$ unit, 11 by 1 unit, 12 by $1\frac{1}{2}$ units, 3 by 2 units, and 31 by more than 2 units. In 10 cases the houses had again become overcrowded to the same extent as formerly, and in 15 the overcrowding had been increased—6 by a $\frac{1}{2}$ -unit, 6 by 1 unit, 1 by $1\frac{1}{2}$ units, 1 by 2 units, and 1 by more than 2 units. The total number of persons now occupying the vacated houses which have so far been re-occupied is 1,594, or 3.08 persons per house, as against 6.18 persons formerly. It is of interest to note that of the tenants who moved in to the vacated houses, 283 came from privately owned houses, 126 were newly married couples, 99 came from lodgings, 3 came from outwith the city, and only 6 came from Corporation houses.

Rent Restrictions Acts:—Three applications for certificates under these Acts were received and all were granted.

New Houses :—Four hundred and eighty-seven houses—106 of three-apartments, 379 of four-apartments, and two of five or more apartments—built by the Corporation, were occupied for the first time, and in addition, 30 houses—6 of three-apartments, 6 of four apartments, and 18 of five or more apartments—built by private enterprise, were also occupied.

Sanitary Conveniences :—Water-closets used in common by two or more tenants now number 5,346, a reduction of 13 since last year. Of these, 1,032 serve two tenants, 3,012 serve three tenants, 1,082 serve four tenants, and 220 serve five or more tenants. The number of pan privies is now 19, an increase of 8 compared with last year. This increase is due to the existence of these conveniences in the area recently added to the Division by the extension of the city boundaries. Thirteen of these privies serve one tenant, 4 serve two tenants, 1 serves three tenants, and 1 serves four tenants. The number of privy middens (3) remains as formerly—1 serving one tenant, 1 serving two tenants, and one serving five tenants. There has been no reduction in the number of houses—44 of one-apartment and 18 of two-apartments—without inside sinks or water supply. The number of houses with baths is 26,387. There are now only 14 common ashpits in the Division, 126 having been removed during the year. Of those remaining, 3 serve two tenants, 3 serve three tenants, and 8 serve five or more tenants.

Drainage :—The supervision and testing of the drainage and plumber-work of new buildings and the overhauling of defective systems at old buildings entailed 2,016 visits and 537 smoke tests. Preliminary inspections of plans and consultations with architects and builders resulted in many improvements in the lay-out of drains and in the position, lighting, and ventilation of sanitary conveniences.

Water Supply :—The water supply of the Division is obtained from Loch Katrine and from Gorbals Water Works, and is very satisfactory. At houses in the higher areas, however, it is not possible to ensure a constant supply without the use of storage cisterns, and these require regular inspection so that they may be maintained in a clean state and properly covered and ventilated. Seven hundred and ninety-nine inspections were made and 216 cisterns were found to require cleansing or to have covers renewed or made dust-proof. The necessary work was subsequently carried out. Fifty-four defective water supply pipes were also repaired, and the Water Engineer was notified of water running to waste at 311 properties.

Cleansing :—9,313 visits were paid in connection with the cleaning of dirty closes, stairs, etc., and 1,790 cards fixing the tenants' rotation of cleaning were served. In only four cases was it necessary to resort to Court proceedings. All the accused pled guilty and were fined in sums ranging from five shillings to two pounds. One hundred and thirty-three tenants were also warned regarding the dirty condition of their dwelling houses, which were subsequently cleaned. The limewashing or painting of 1,108 staircases was carried out at the instigation of the Department, and 368 accumulations of garbage were removed.

Rehousing Schemes :—Sixty-four houses in the area recently added to the city now bring the total of such houses in the Division up to 983. Three tenants were evicted during the year for non-payment of rent, 19 removed for private reasons, and four transferred to other schemes. All the vacated houses, including 12 that were vacant at the end of last year, were re-occupied during the year. Fourteen tenants were dealt with for keeping dirty houses, and 67 were warned as being unsatisfactory.

Intermediate Housing Schemes :—Nine hundred and thirty-five visits were paid to houses in these schemes. Eight hundred and eighty-three were found clean, 39 were fair, 12 were unsatisfactory, and one was dirty. On those in the three latter categories being revisited, it was found that an improvement had taken place.

Verminous Children :—Two hundred and fifty-two schools were visited, and 1,932 children were submitted for examination. Two hundred and seventy were found to be verminous, and 79 were dirty. The homes of these verminous and dirty children were visited and the parents warned regarding their condition. It was also found that 23 of the homes were in a dirty condition, and in 25 cases the bedding was dirty. The necessary cleaning was subsequently carried out.

Common Lodging Houses :—There are two common lodging houses in the Division and both are for males. In one the usual high standard of cleanliness has been maintained, but in the other recently a very close supervision has been required to ensure cleanliness and good repair.

Shops Act, 1934 :—Eight hundred and sixty-six visits were paid to shops, and in 48 of these in which means to maintain a reasonable temperature had not been provided, suitable heating facilities were subsequently introduced. An improvement in the sanitary accommod-

ation was effected at one shop, and in 18 cases choked or defective sanitary fittings were cleared or repaired. Twelve shops found in a dirty condition were limewashed or otherwise cleansed, and in 32, disrepair and other minor nuisances were remedied.

Factories, &c.:—The Factories Act, 1937, which supersedes the Factory and Workshop Act, 1901, came into operation on 1st July, 1938. The new Act considerably increases the scope of the work to be undertaken by the Department, adding many new duties and transferring others formerly undertaken by the Home Office Inspectors. 4,052 visits were made under the Acts, and 76 occupiers whose premises were in a dirty condition were dealt with. Action was also taken with regard to 291 other contraventions of the Acts. Two hundred and thirty-one visits were also paid to the homes of outworkers, and all were found to be satisfactory.

Licensed Brokers:—Nineteen applications for brokers' licences were made, and the premises proposed to be used for carrying on the businesses were inspected and approved before the licences were granted.

Cemeteries:—Forty-four visits were paid to cemeteries. In accordance with the arrangement that the permission of this Department be obtained before an interment takes place in Old Cathcart Churchyard, 12 applications for permission were received. One of these applications was subsequently withdrawn. In seven cases permission to inter was granted, but the remaining four applications had to be refused as the bye-laws could not be complied with, there being insufficient depth.

Hostels:—Two hostels were established in the Division during the year, one by the Youth Hostels Association and the other by the London, Midland and Scottish Railway Company. The first is at Cathcart and consists of the former Police Offices and Barracks, which have been adapted and fitted out for the use of members of the Association. There is sleeping accommodation for 78 members on the basis of 400 cubic feet of space per person, with cooking and dining facilities and ample sanitary arrangements. Both sexes can be accommodated. There is a house of three-apartments attached to the hostel for the use of the Warden and his family. Only members of the Association are allowed to use the hostel, and as most of them are hikers or cyclists their stay is usually of short duration, but, especially during the summer months, the accommodation is often taxed to its utmost. For a short period in

the season permission was given to use an adjoining hall as a sleeping place for a limited number who could not be taken in to the hostel, but this was only a temporary measure.

The other hostel belonging to the Railway Company is for the use of railway employees coming to the city in charge of long distance trains and who have to stay overnight. There is sleeping accommodation for 51 persons, and about 400 persons use the hostel every week. There is a separate cubicle, containing 630 cubic feet, for each person accommodated, and the cubicles and beds are thoroughly aired after use and are not again occupied until the elapse of a period of at least five hours. Clean sheets are supplied to each new occupant. The hostel is under the supervision of a matron who occupies a house of three apartments attached to the premises, and she is assisted by two cleaners. There are also two wardens who work on shifts. There is a properly furnished dining room; a kitchen with gas stove and hot plate on which each occupant cooks his own food; and a recreation room. Ample sanitary accommodation is provided, and all refuse is removed daily.

Tents, Vans, &c.:—A large camp was established in a field at Boydstone Road by the Scottish Travel Association in conjunction with the Camping Club of Great Britain and Ireland for the purpose of accommodating visitors to the Empire Exhibition. Some 15,000 people made use of the camp, which was well conducted. Owing to the isolated position of the site, drainage facilities were of course not available, but an ample number of closets of the "Elsan" type were provided and under proper supervision proved satisfactory. A water supply from the Corporation mains was laid on to the ground. Adequate arrangements were also made for the disposal of refuse, and portable incinerators were provided for the burning of combustible material.

Less satisfactory conditions were found to prevail at another camp established without sanction at a farm where no adequate sanitary arrangements had been provided, and the field used, having recently been under cultivation, was soon in a muddy and objectionable condition. On being warned, the farmer applied to the Corporation for permission to carry on the camp, but this application was refused. Subsequently the farmer agreed to transfer the camp to a more suitable field and to provide a water supply and also "Elsan" closets for the separate use of the sexes. Sanction to carry on the camp was then granted, and, under supervision, it was maintained in a satisfactory condition until it was discontinued at the close of the Exhibition.

The vans of travelling showmen visiting the Division were also kept under supervision during their stay, and action was taken to see that proper sanitary arrangements were made and maintained. The largest show was the Bertram Mills Circus, but although the sanitary arrangements were necessarily extensive, no difficulty was experienced as the management were very willing to meet all requirements. With regard to the smaller shows, the great difficulty is to prevent the crowding of too many vans on the ground, resulting in an excessive density.

DUNCAN THOMSON,
Divisional Sanitary Inspector.

SOUTH-WESTERN DIVISION.

The successful enforcement in the Dean of Guild Court of the provisions of the Glasgow Corporation Order, 1937, which resulted practically in the suppression of unauthorised sub-letting of rooms of large houses in Pollokshields where it obtained a foothold in 1937, coupled with the definite arrest of the spread of this objectionable form of housing in that district in 1938, was an outstanding feature of the year. The Empire Exhibition entailed an enormous amount of supervision in a variety of directions and a review of some of its sanitary features is submitted. The Factories Act, 1937, which came into operation on 1st July, 1938, added considerably to the statutory duties of the Department, in the carrying out of which a very large number of improvements were effected.

New houses for the relief of overcrowding and for slum clearance were built during the year. Demolition of uninhabitable houses in the Orkney Street Area continued, though somewhat slowly, because of the scarcity of alternative accommodation. Nuisances show a slight decrease. Drainage is satisfactory and all tenement property has water closet accommodation. Two houses are still without an inside sink and water supply. Details of routine work will be found in the Appendix (Table XXIII).

Sub-Letting :—The measures taken to counteract the activities of those engaged in what was regarded as illegal sub-letting of the individual rooms of large houses to families as service flats and which, if unchecked, threatened last year to become a menace to a residential district hitherto free from this type of housing met with considerable success not only through the operations of the powers contained in the Glasgow Streets,

Sewers and Buildings Consolidation Order Confirmation Act, 1937, which makes it an offence for any person to sub-divide any building so as to increase the number of dwelling-houses therein without having first obtained a decree of lining therefor from the Dean of Guild, but also from the publicity resulting from the action so taken. It may be recalled that in last year's Report reference was made to half-a-dozen houses of eight or more apartments where the rooms were sub-let by non-resident principal tenants to separate families at 10/- a week, unfurnished. These rooms were virtually farmed-out houses. As the six principal tenants appeared to be in breach of the provision above referred to the facts were reported to the Master of Works who caused legal proceedings to be instituted in the Dean of Guild Court. Three pleaded guilty and were admonished ; these tenancies were terminated at Whitsunday, 1938, In two cases, changes of occupancy occurred. In the sixth case the occupancy changed at Whitsunday, the house being let by the proprietrix to her husband who undertook to try to get rid of the sub-tenants. No new cases of this objectionable form of housing occurred in 1938 in Pollokshields the district herein referred to.

The following cases of sub-letting, however, occurred in parts of the Division other than the one just alluded to and were duly reported to the Master of Works. A man who for a year previously had been a sub-tenant of a room in a four apartment house, rented at £26 10s. a year, became the principal tenant in 1938, whereupon he retained one room for the use of his own family and sub-let the others unfurnished to three different families at a gross weekly rent of £1 6s. The sub-tenants removed without recourse to legal proceedings in the Dean of Guild Court. A house of five apartments with an annual rent of £30 and let on 28th May, 1938, was sub-let by the non-resident principal tenant to five separate families at rents amounting in all to £2 8s. 6d. a week. Proceedings were instituted against him in the Dean of Guild Court for contravening the 1937 Act and he was fined in £2 2s. He informed the Court that he was terminating his tenancy on 28th November but the sub-tenants were still in occupancy at the end of the year, and were sitting rent-free.

In two cases the persons reported were Indian pedlars. One, formerly in business in Dundee, became the tenant of a combined shop and house of three apartments rented at £20 a year. He used the shop as business premises and one of the rooms for his own family, and sub-let the other rooms to two separate families. In the other case, a combined shop and three apartments rented at £30 a year was let in September, 1938,

jointly to two Indian pedlars. They occupied one apartment as a living room. They sub-let the shop as a sleeping apartment unfurnished at 11/6d. a week to a family from Airdrie which comprised a man and woman and her son and daughter aged 16 and 10 years respectively. The two remaining rooms (one of which was used for cooking only) were let unfurnished at 14s. a week to a family of 13 persons, viz. :—husband, wife, five sons, aged respectively 14, 9, 6, 3 and 2 years and six daughters, aged respectively 15, 13, 10, 5, 5 and 2 years. These cases had not been disposed of at the end of the year.

A five apartment house in a tenement and with a yearly rent of £33 was sold in April, 1938, and the new proprietrix let each apartment unfurnished, to a separate family at rents from 9s. to 12/6d. a week, making a total of £2 8s. 6d. a week for the five rooms. This case which came before the Dean of Guild Court in December was pending at the end of the year.

Empire Exhibition, Scotland—1938 :—The supervision of the laying of nine miles of branch drains and of the installation of 1,200 water-closets and urinals and 900 washhand basins and sinks at the Exhibition meant an extraordinary increase in the work of the Divisional staff. Prior to the opening, consultations with architects and contractors were of daily occurrence and inspection and testing of drains and plumberwork was practically continuous. The examination of places where food was stored, prepared or sold was made daily during its currency, as was the systematic inspection of other premises with regard to general cleanliness. Strict supervision was daily exercised over the public conveniences ; special attention was directed to the provision of adequate sanitary accommodation and washing facilities for the employees ; and appropriate action was taken with respect to rat infestation.

Drainage :—All drains were laid in accordance with the requirements of the drainage bye-laws, that is, rain water and waste pipes were disconnected from the soil drains which were trapped off from the public sewer by intercepting traps. In fact, the only departure from the bye-laws was that re-sealing traps, which proved satisfactory, were fitted to sinks where it was impracticable to ventilate long branches by the usual anti-syphon pipe. There were no cesspools. 12,479 lineal yards, just over seven miles, of 4", 5", 6", and 9" fireclay drains and 3,237 lineal yards, almost two miles, of 3", 4", 5" and 6" iron drains were laid under the immediate supervision and to the satisfaction of the sanitary

officers. This entailed the application of 594 smoke or water tests. The high standard of the work executed is reflected in the fact that no major drainage chokages occurred at any time.

Precautions in the Preparation of Food for Sale :—Systematic inspection was made of all premises where food or drink was prepared, stored or sold. In one case, an exhibitor, instead of providing sinks with a water supply and drainage, proposed to instal galvanised iron storage tanks for the water supply, portable enamelled iron basins for sinks and galvanised iron cesspools for the waste water (to be emptied each night). This very retrograde suggestion was, of course, turned down. As the reason given for this intended departure was the tender of an offer for sinks and drainage by his principal contractor which was considered exorbitant by the exhibitor he was advised to get an estimate from a local firm, which he did, and the required sinks, water fittings and drainage were duly installed to the satisfaction of all concerned. (There was an unrestricted supply of pure water at hand and a drain ran practically alongside the building). It may be added that sinks with a water supply and drainage were insisted on in every case ; no portable basins were permitted.

Sanitary, Lavatory and Sink Accommodation—(a) *Private Accommodation for Staffs* :—For the private use of their employees a number of firms installed 206 water closets, 33 urinals, 213 washhand basins, 278 sinks and 4 baths. (b) *Public Conveniences* :—Six hundred and twenty-seven water-closets, 359 urinals and 476 washhand basins were provided for the use of the general public and of the staffs of those exhibitors who had made no provision for their assistants. (The public conveniences on the basis of the Corporation byelaws were sufficient for 395,000 persons ; the highest daily attendance was 364,092).

In tabular form these conveniences were as follows :—

For Whom Provided	Water-Closets.	Urinals.	Wash hand Basins.	Sinks	Baths
(a) Private Staffs—For Females	101	—	96	{ 278	4
For Males	105	33	117		
(a) Private Staffs—Total	206	33	213	278	4
(b) For General Public—For Females	419	—	249	—	—
For Males	208	359	227	—	—
(b) For General Public—Total	627	359	476	—	—
Grand Total ...	833	392	689	278	4

Right of Use of Sanitary Accommodation by Employees:—Roughly 5,000 persons were employed at the Exhibition. The total public sanitary and lavatory accommodation was ample but the Exhibition Authorities had farmed it to a concessionaire who made a charge for the use of the conveniences and his services. When space was let to exhibitors in some cases no definite arrangement was made between the Exhibition Authorities and the exhibitors regarding staff sanitary and lavatory accommodation, the former evidently relying upon the exhibitors coming to terms with the concessionaire, and those exhibitors who had failed to notice that their leases did not include such accommodation assuming that it would be provided by the proprietor (the Exhibition Authorities) with the result that the rights of the employees were jeopardised by delays on both sides. Whatever the points at issue between the Exhibition Authorities and exhibitors, this Department was at no time in any doubt as to the statutory right of the employees to sanitary and lavatory accommodation being provided and maintained for their use by one or other of the parties and was prepared to enforce this right in the event of a satisfactory solution not being reached. After a good deal of negotiation the Exhibition Authorities arranged that all employees for whom sanitary and lavatory accommodation had not already been allotted should have free use of the public conveniences.

Daily Cleansing of Sanitary Conveniences and Lavatories:—With a view to assisting the Exhibition Authorities in maintaining a very high standard of cleanliness in the public conveniences a short code of rules was drawn up for their guidance. These, among other matters, provided for the daily sweeping, washing and disinfection of floors, seats and basins of water closets, and floors and basins of lavatories; the dusting, washing and disinfection of walls, doors partitions, cisterns and waste and other pipes; the washing of windows; the cleaning of attendants' rooms; the collection of floor sweepings; and the provision and maintenance of a supply of toilet paper. The very numerous inspections made at all hours revealed that the rules on the whole were strictly complied with. In the few exceptions where default was disclosed the shortcomings, on being reported to the Exhibition Authorities, were at once attended to.

Direction Signs to Conveniences:—Originally at the ground level and painted green, the wooden direction boards placed on the grass verges blended so well with the colour scheme that their utility was lost. Latterly they were removed from their unsuitable location and nailed to posts about seven feet high with satisfactory results.

Use of Girl Guides' and Boy Scouts' Halls as Temporary Hostels :—

Groups of visiting Girl Guides and Boy Scouts were accommodated during their stay, usually of a week's duration, in halls belonging to their own organisations. Such of the halls as were used for this were well equipped with cooking facilities and had ample lavatory and water-closet accommodation and before occupation for billeting also satisfied the requirements of the Master of Works and the Chief Officer of the Fire Brigade. Permits were granted by this Department on the following conditions, viz. :—that not less than 45 feet of floor space be allotted to each person ; that notice in writing be given to the Department by the person applying for permission to use the hall as a hostel of the number of persons proposed to be accommodated at any one time, the duration of stay and the town from which they came, two days prior to their arrival ; that each person before leaving home obtain a medical certificate that he or she was free from infectious disease and had not recently been in contact with any person so suffering (it was indicated that the local Medical Officer of Health would grant a group certificate free of charge) ; and that in the event of illness occurring among the visitors notice thereof be sent immediately to the Public Health Office. The person responsible for the visitors during their stay at the hall was required to keep therein a register of the names and addresses along with the dates of arrival and departure. It was also stipulated that the floors be swept daily and washed weekly. These conditions were readily complied with by those in charge and in every case the halls were kept in a highly satisfactory condition.

*Vans used for Human Habitation :—*Only half-a-dozen vans used for human habitation were located within the Exhibition grounds. They were at all times kept clean. One (constructed in Germany and four times as long as it was broad—33 feet by 8 feet 3 inches) was fitted for 12 persons (midgets). It was divided transversely by a solid partition from floor to roof which converted the vehicle into two equal compartments, one for each sex and each with a separate means of access. Each compartment contained six bunks, had two portable washhand basins on a washstand 1 foot 6 inches high and was heated with an oil stove. A hanging wardrobe and a clothes chest were provided for each occupant. The bedclothes were scrupulously clean and the whole exceptionally neat, compact and tidy. The surroundings of the van were also satisfactory.

Rat Destruction :—It was inevitable that rats were attracted to the site. The temporary nature of the buildings made them vulnerable to vermin and feeding was plentiful despite the careful precautions taken against this. Repressive measures were instituted at the outset and continued relentlessly under the direction of the Department throughout the course of the Exhibition. With the closing down of the buildings and their demolition it was recognised that the rats might leave the locus and find harbourage elsewhere in the vicinity. The Exhibition Authorities were therefore called upon and agreed to insert an item in their contractors' specification of demolition to cover the cost of the extermination of the vermin on the sites in the course of these operations. Immediately after the closing down of the Exhibition and when food for the rodents was necessarily becoming scarcer a complete re-survey of the ground and buildings was carried out resulting in an increase of Exhibition staff and equipment being brought to bear on the problem. Trapping and poisoning on a more elaborate scale were entered upon and gassing was resorted to where practicable. This intensified campaign was maintained till the end of the year with most gratifying results. The situation was completely in hand throughout, and there was no justification for the alarmist reports which circulated in the district during the course of the Exhibition.

Factories Act, 1937 :—This Act which came into operation on 1st July, 1938, amended and consolidated factory legislation. Among its many changes the most important, from the public health administrative point of view, was the transference of the duty of enforcing the provision of sufficient and suitable sanitary conveniences in practically all factories, and of certain other health conditions in factories in which mechanical power is not used, from H.M. Inspectors of Factories to officers of the Local Authority.

Register of Factories :—A register of all factories must be kept with respect to which the duty of enforcing the provisions above referred to applies. The distinction between a factory (mechanical) and a workshop (manual) which obtained in the Factory and Workshop Act, 1901, has been abolished and only the term "factory" is used in the new Act. (A factory may be either (a) a factory in which mechanical power is used or (b) a factory in which mechanical power is not used.) At the end of the year there were on the register 791 factories, comprising 556 in which mechanical power is used and 235 in which mechanical power is not used.

Factories in which Mechanical Power is used :—Consequent on the inspections made by sanitary officers in the performance of their new duties and the issue of formal intimations to employers whose factories were not in accordance with the requirements of the Act or of the Sanitary Accommodation Regulations, 1938, a variety of improvements were effected. These included the abolition of foul trough water-closets and the substitution of conveniences of a modern type. This necessitated meetings with the employers and their contractors to discuss the most efficient way to modernise the sanitary accommodation ; the lay-out of drainage (keeping in view likely additions due to the enforcement by H.M. Inspector of Factories of Section 42 of the Act with regard to washing facilities which does not come into operation until 1st July, 1939, and which dealing as it does with washhand basins (and drainage therefrom) might more conveniently have been applied by officers of the Local Authority) ; and the supervision of the new work during its progress and its testing on completion. The removal of objectionably situated water-closets and their re-erection on suitable sites, also called for special consideration. New water-closet accommodation, where it was insufficient, and additional conveniences where persons of both sexes were employed and where separate suitable accommodation was not provided, received attention, although, on the whole, the sanitary accommodation was adequate. Intervening ventilated spaces between conveniences and workrooms were provided in many instances and the means of artificial lighting (usually electric light) was installed in more than 200 water-closets. Dirty floors, seats, and basins of many water-closets were cleansed (as a rule, water-closets are swept daily and washed weekly) and walls and ceilings whitewashed, distempered or painted. Proper doors and fastenings are now required on all sanitary conveniences (under the revoked Sanitary Accommodation Order of 1903 this applied only to conveniences for the use of females) and in this connection 162 new doors were provided and 229 fastenings were fitted to doors of existing water closets. Another new provision is that where persons of both sexes are employed the conveniences for each sex must be indicated by a suitable notice, and in 31 instances such notices were painted on water-closet doors.

The nature and importance of the improvements effected will be more readily appreciated from a perusal of the following table which shows the work done in factories by employers from 1st July till 31st

December, on intimation being given them regarding acts of neglect or default :—

Artificial lighting installed in W.C.'s	...	...	...	...	213
Artificial lighting in W.C.'s repaired or overhauled	...	...	...	...	32
Dirty urinals cleansed	...	...	...	...	30
Dirty W.C. doors washed with soap and water	...	...	...	...	9
Dirty W.C. floors, basins or seats cleansed	...	...	...	...	146
Dirty W.C. walls whitewashed or painted	...	...	...	...	49
Doors provided for W.C.'s	...	...	...	...	162
Fastenings fitted to W.C. doors	...	...	...	...	229
Floors, partitions, doors, etc. of W.C.'s repaired	...	...	...	...	15
Flushing cisterns of W.C.'s repaired	...	...	...	...	15
Glass panes and roof lights of W.C.'s renewed	...	...	...	...	20
Notices painted on W.C. doors	...	...	...	...	31
Partitions erected between W.C.'s	...	...	...	...	24
Passages to W.C.'s paved or otherwise improved	...	...	...	...	7
Privy pans abolished	...	...	...	...	3
Ranges of trough W.C.'s abolished	...	...	...	...	5
Refuse or litter removed from W.C. or urinal floors	...	...	...	...	10
Roofs, gutters or rain conductors of W.C.'s repaired	...	...	...	...	17
Seats for W.C.'s provided or repaired	...	...	...	...	20
Sink renewed	...	...	...	...	1
Soil pipes or drains repaired	...	...	...	...	4
Sparge pipes or flushing cisterns provided for urinals	...	...	...	...	3
Urinals provided	...	...	...	...	4
Urinals screened off from factories	...	...	...	...	14
Ventilated spaces provided between W.C.'s and workrooms	...	...	...	...	41
Ventilation provided for spaces between W.C.'s and workrooms	...	...	...	...	2
Ventilation provided for W.C.'s	...	...	...	...	26
W.C.'s where accommodation not provided for both sexes	...	...	...	...	1
W.C.'s substituted in place of privies or of W.C.'s objectionably situated within factories	...	...	...	...	16
W.C.'s, washdown, substituted for trough W.C.'s	...	...	...	...	22
Washhand basin renewed	...	...	...	...	1
Window sash cords or quadrants of W.C.'s renewed	...	...	...	...	5

In addition a good deal of work of a similar nature was in hand in a number of factories but had not been quite completed at the end of the year. That so much has been achieved in six months is a tribute alike to the desire of the employers to comply expeditiously with the sanitary demands imposed upon them by the statute and to the tactful handling by the sanitary officers of their additional duties in this connection.

Factories in which Mechanical Power is not used:—In the new Act what was known under the 1901 Act as a workshop is now a factory in which mechanical power is not used. The inspection of these was continued and attention directed to their cleanliness, ventilation,

heating and airspace as laid down in the new Act. Details are shown in the Appendix. A new provision is that a thermometer shall be provided and maintained in every workroom in which a substantial proportion of the work is done sitting and does not involve serious physical effort, and a temperature of at least 60° F. must be maintained. In no case was the temperature below the standard, but in 30 instances thermometers had not been provided. This new requirement was brought under the notice of employers who had failed to observe it, viz. :—dressmakers (8) ; furriers (2) ; milliners (3) ; stocking knitters (3) ; tailors (10) ; and watchmakers (4), who thereupon brought their premises into line with the Act. Where thermometers were newly installed temperatures were found to range from 60 to 66 degrees.

Bakehouses :—Sections 97 to 100, inclusive, of the Factory and Workshop Act, 1901, which deal with bakehouses (other than basement bakehouses) and the administration of which was some years ago transferred from the Home Office to the Department of Health for Scotland are in the new Act treated as appertaining to public health law rather than to the Factories Acts, and are re-produced with modifications in Part I of the Third Schedule to the new Act pending further public health legislation to supersede them altogether. There are 42 ordinary bakehouses (24 mechanical and 18 non-mechanical) and 5 basement bakehouses (all mechanical). Every basement bakehouse must be inspected in the year ending 30th June, 1939 and in every succeeding year thereafter, and if it is unsuitable, the Local Authority shall give notice in writing that the existing certificate of suitability (granted under the 1901 Act) shall cease to have effect within a month, and the bakehouse must thereafter be closed. Right of appeal to the Sheriff is given. If the basement bakehouse is suitable the certificate will continue to operate for five years. If a basement bakehouse is out of use as such for over a year it cannot be so used again. Bakehouses on the whole, and particularly the very large ones, were very well kept. A number of acts of neglect were noted and these included overdue limewashing of walls and ceilings, dirty floors, utensils or machinery and minor defects of structure. The use as a baking room of the basement below a small retail bakehouse was discontinued forthwith on the attention of the occupier being directed to the offence.

Offices :—Offices are dealt with under the Public Health (Scotland) Act, 1897, which contains specific powers in connection with the provision of water closet accommodation for the separate use of each sex in buildings in which persons are employed in any business and general powers

with respect to any defect which amounts to nuisance within the meaning of that Act. During the year 336 offices, comprising 937 rooms, most of which were measured, were inspected. On the whole, they were clean and well lighted and ventilated and had drinking water and water closet and lavatory accommodation. All were free from overcrowding. In several, however, the conditions warranted action under the Public Health Act, and, consequent on intimations to the occupiers, improvements including the following were effected, viz. :—Walls and ceilings of offices, halls, staircases, counting houses, draughtsmen's and tracers' rooms whitewashed, colourwashed, distempered or painted (15) ; walls and ceilings of water closets washed down, whitewashed or painted (8) ; water closets ventilated (5) ; artificial lighting provided in water closets (5) ; water closet basins cleaned (5) ; ventilation improved (2) ; office floors cleaned (2) ; water closet floors cleaned (2) ; urinals cleaned (2) and office windows washed (2). Other improvements were the discontinuation of the use of an office without ventilation ; repair of broken plaster on water closet walls ; the replacement of missing tiles on urinal walls ; renewal of broken window sash cords ; extension of water closet partitions to ceiling ; provision of additional water closet accommodation where persons of both sexes were employed ; dusting of shelves and furniture and the cleaning of a washhand basin.

No difficulty was experienced in getting the above work carried out but it is suggested that it would be an advantage in any future legislation affecting offices to include provisions dealing specifically with inspection, light, ventilation, heating, airspace, drinking water, lavatory accommodation, whitewashing and painting of walls and ceilings, sweeping and washing of floors, cleansing of windows and means of artificial lighting of sanitary conveniences, somewhat along the lines of the Factories and Shops Acts.

Shops :—Under the Shops Act, 1934, 3,677 visits of inspection were made ; in two shops sanitary accommodation was installed and in 48 heating facilities were provided or improved. Following on a notice under Section 10 of the said Act, water closet accommodation and washing facilities were made available for the use of female and male assistants at the Empire Exhibition in those cases where satisfactory arrangements had not already been made by the Exhibition Authorities or the employers.

Nuisances :—Inspections for the discovery and removal of nuisances totalled 109,815 compared with 115,394 in the previous year, and the nuisances removed or abated numbered 10,945 as against 11,369 in 1937. They were of the type usually found in large urban communities and all were remedied without recourse to Court proceedings.

The Corporation invited tenders from various firms for the prevention of the emission of grit from the chimneys of the Govan Refuse Power Works. The lowest offer, received in December, was over £34,000. The formal contract had not been signed at the end of the year.

Common Lodging Houses :—There was no change during the year and applications were granted for renewal of the registration of four large common lodging houses with from 200 to 500 beds and two small ones each with less than a dozen beds. All were found clean and there was no overcrowding. Breaches of the byelaws which were of a minor character on being brought to the notice of the keepers were remedied forthwith.

In the large lodging houses the charges are 8d., 9d., 10d., and 1/- a night (the legal maximum permissible is 1/-) and beds are let nightly or weekly. Until recently when a lodger paid for his bed in advance for a week he got seven nights' accommodation for the price of six, but this practice now obtains in one lodging house only and there the nightly and weekly charges are 8d., and 4/- respectively.

In two of the houses, lodgers do their own cooking at hot plates in the common kitchens; in the third they have the choice of food cooked by the keeper or may use the hot plate, while in the fourth, in which there is no hot plate, food is cooked by the keeper in the kitchen to which the lodgers have no access.

The following is a copy of the bill of fare and scale of charges in the lodging house where there is no hot plate. *Breakfast* :—bacon and egg, 4½d. ; sausages (2), 1½d. ; sausage (one slice), 1d. ; and tea, rolls (2) and margarine, 2d. ; *Dinner* :—stewed steak and potatoes with peas or beans, 4d. ; Irish stew, 3d. ; sausages and potatoes, 2½. ; fried fish and potatoes, 3d. ; boiled fish and potatoes, 3d. ; broth, 2d. ; steamed pudding, 1d. ; and rice and prunes, 2d. ; *Tea or Supper* :—bacon and egg, 4½d. ; black pudding, 1½d. ; kippers (2), 1½d. ; fried herring (1), 1½d. ; egg (1), boiled or fried, 2d. ; bread and margarine, per slice, 1d. and tea-bread ½d. each. In the common lodging house where the lodgers may either use the hot plate or procure food cooked at the shop within the lodging house the

following articles of food may be bought at the prices noted. *Breakfast or Supper* :—porridge (without milk), 1½d. ; *Dinner (served at any time of the day)* :—soup, 1d. and 2d. ; mince, 3d. ; stew, 4d. ; potatoes, 1d. ; vegetables, 1d. and 2d. ; steak pudding, 4d. ; rice, 1d. and 2d. ; fruit dumpling, 2d. and salt fish, 3½d. Only a very few lodgers purchase cooked foods in this lodging house.

In both small lodging houses, the charge is 5/6d. a week which includes 1/- for gas (cooking) and electricity (lighting). Lodgers cook their own food on gas rings.

Common lodging-house keepers have not benefited from the recent influx to the city of men of the labouring class and in the larger houses the supply of beds again exceeds the demand ; at the end of the year there was an actual surplus of 500 beds in the four large common lodging-houses, equal to one-third of the accommodation available. In an attempt to attract more lodgers to his house, one keeper is enlarging the cubicles, substituting spring mattresses for flock beds, introducing wardrobes and installing electric switches within the cubicles.

Houses let in Lodgings :—Houses or parts of houses let in lodgings or occupied by members of more than one family are dealt with under the Public Health (Scotland) Act, 1897, which provides for the making and enforcing, for the whole or any part of a district, of byelaws for fixing the number of persons who may occupy a house or part of a house, and also for registration, inspection, periodical limewashing and other cognate matters. Under the byelaws a standard of 400 cubic feet for a person over 10 years and half that amount for a person under that age is operative. At the end of the year there were 36 houses on the register. They come under one of the four following groups :—

- (1) *Where the (a) tenant's family and (b) one or more lodger families occupy the house.*

The tenant reserves one room only, usually the kitchen (rarely he may occupy two rooms), for the accommodation of his own family, and sublets the other rooms to one, two, three or four families according to the number of rooms in the house. (Occasionally one lodger family may occupy two sublet rooms in a house, but this is not necessarily dependent on the size of the lodger family). The weekly rent of a sublet room is from 5/- to 12/-, the commonest charges being 9/- and 10/- and for two rooms, almost invariably, 12/-. Rooms may be furnished or unfurnished ; in most cases the furnishings belong to the lodger family.

- (2) *Where (a) the tenant's family (b) one or more lodger families and (c) male and/or female lodgers occupy the house.*

Here the tenant reserves his own accommodation as in (1) above ; one or more rooms are sublet to families at rents also as in (1) above ; and the remainder to male or female lodgers (usually one person per room). For a male lodger the weekly charge is from 5/- to 7/- and for a female lodger 6/-. Where two women lodgers share a room, the rent is 6/- for the room.

- (3) *Where (a) the tenant's family and (b) male or female lodgers occupy the house.*

One, and occasionally two, rooms are reserved for the tenant and his family, and the others let in lodgings to male or female lodgers. Here, as a rule, each lodger has the sole use of his or her room. The charges are as shown in (2) above.

- (4) *Where (a) the tenant's family and (b) male lodgers only are accommodated.*

This group differs from the foregoing three ; they are lodging-houses in the ordinary sense of the term. Here also one room only is retained by the tenant for the use of his or her own family. The other rooms are let in lodgings to men of the labouring class ; from two to five men may occupy one room. The men may be lodged only or lodged and boarded. For lodging only the weekly charges per lodger are 4/- (5 in a room) ; 5/6d. (4 in a room) ; and 5/- to 6/- (2 in a room). For board and lodgings these men, if working, pay from 14/6d. to 22/- a week (14/6d. is exceptional ; 20/- is not uncommon) and if they are unemployed 12/6d. is the charge. (An unemployed unmarried man receives 17/6d. a week, 5/- of which is for lodgings, from the Public Assistance Department).

The unemployed lodger who is lodged and boarded for 12/6d. a week gets tea, bread, margarine and jam at every meal every day. In addition, he has, for breakfast a boiled egg each day of the week ; for dinner, on Sunday, broth, meat and potatoes ; on Tuesday and Saturday, mince, onions and potatoes ; on Wednesday, boiled bacon or pork ribs, cabbage and potatoes ; on Thursday, stewed steak, potatoes carrot and turnip ; and, on Friday, fried fish and potatoes ; and for tea, on Sunday, Tuesday and Saturday, corned mutton or a boiled egg ; on Monday, cold meat ; and on Wednesday, Thursday and Friday a boiled egg. For supper he has tea, bread, margarine and jam every night.

The employed lodger who pays 14/6d. a week for his lodging and board also gets tea, bread, margarine and jam at every meal taken in the house ; and, in addition, for breakfast, has either two boiled eggs or bacon and egg ; for dinner, which he carries with him, meat and bread

(sandwiches) and sugar and dry tea ; for tea, he has the same kind of food as the unemployed lodger has for dinner, and, for supper, he also has tea, bread, margarine and jam.

In another lodging house, the employed lodger, paying 20/- for his week's board and lodging, receives for breakfast, bacon and two eggs and tea, bread, margarine and jam ; for his midday meal, which he carries with him, corned meat or mutton and bread and margarine (sandwiches) and sugar and dry tea ; and, for tea, stewed steak, potatoes, tea or cocoa, bread, margarine and jam. Supper is not served in this house.

Farmed-out Houses :—In four instances farming-out of houses was brought under the notice of the house factors concerned who took successful action against the principal tenants for sub-letting their houses contrary to the terms of the leases. There have been no farmed-out houses on the Register since 1934. During the past five years 34 attempts of unauthorised farming-out of houses have been frustrated through the collaboration of house factors and the Department ; such action has contributed materially to the prevention of the spread of farming-out of houses, particularly in Kingston Ward, where most of the cases referred to occurred.

New Houses :—New houses numbered 513, being an increase as compared with the previous year's total of 481, and of 431 in 1936. Private enterprise contributed 59 bungalows and semi-detached villas, for sale, at Titwood, Hillington and Crookston, as against 96 and 129 in the two immediately preceding years. The Corporation erected 454 houses which is substantially the same as for 1937 and 1936 when the figures were 481 and 431 respectively. Of this year's total, 104 were ordinary (unsubsidised) houses completing the scheme at Bellahouston ; 298 were intermediate (decrowding) houses at Berryknowes and 52 were re-housing (slum clearance) houses also at Berryknowes.

Reconditioning of Houses :—No houses were reconditioned during the year. From 1933 to 1937 inclusive 42 houses lacking some of the more modern amenities have been converted voluntarily by the owners into 62 modernised houses, that is a net increase of 20 houses in five years. The reconditioning included the provision of a light bathroom with modern water closet, bath and washhand basin, hot water installation, electric light, interior grates and re-decoration, and where necessary drainage alterations.

Repair of Houses :—Intimations under the Public Health Act, 1897, regarding disrepair or dampness in 1458 houses were attended to.

Houses closed and/or demolished to allow of Business Extensions :—In last year's report reference was made to 42 controlled houses, forming parts of tenements and belonging to one firm, which had been closed by mutual arrangement between the tenants and the owners prior to the ultimate demolition of the tenements and the utilisation of the sites for business extensions. Four additional houses in these tenements were closed this year. These houses are not uninhabitable and the position now is that eight four-storey tenements of habitable houses are standing either wholly or partially empty to allow of future business extensions in a time of housing shortage.

An owner anxious to extend his factory on a contiguous site on which there is a tenement of 13 occupied houses, also owned by him, early in the year offered his tenants £10 each to give up their houses in the hope of his projected extension being expedited. Nine accepted the offer and found houses elsewhere ; four were still in possession at the end of the year.

Service Rooms recorded as Houses :—Attention was directed in last year's report to the recording in the Valuation Roll of each service room as a separate house, a practice to be deprecated from the statistical point of view as showing a fictitious increase in the number of one apartment houses in the City. In this Division there has been an actual decrease in the number of one-apartment houses during the year but an increase is shown in the Valuation Roll.

How part of this non-existent increase occurs is illustrated in the case of the house already referred to where the new tenant undertook to get rid of the sub-tenants on the change of tenancy. In the Valuation Roll for 1937/1938 this subject was shown as one house only, with a yearly rent of £55, with the tenant as the occupier of the subject, but in the Roll for 1938/1939 it appears as (a) one house with a yearly rent of £55, with the principal tenant again as occupier of that subject and in addition (b) seven subjects without any assessable rent, each described as a house in the Roll (six being shown as being occupied by " tenants who are not occupiers " and one (the caretaker's) as being occupied by an " inhabitant occupier ") giving a total of eight houses in the Valuation Roll in 1938, where only one house existed in 1937 and where, as a matter of fact, no increase in the number of houses had taken place in the interval.

Slum Clearance.—*Orkney Street, Etc., Area*:—Fifty houses (including ten in occupation at the end of 1937 and since closed) comprising two tenements were demolished and 39 out of 48 houses in two other tenements were closed (preparatory to demolition) during the year. The majority of the tenants displaced in 1938 were removed to adjacent rehousing schemes as and when re-lets occurred therein. During the past two years 216 uninhabitable houses have been closed and/or demolished in this Area of 721 houses. The rate of the progress of rehousing the remaining 505 tenants depends on the availability of suitable alternative accommodation.

Paisley Road West Compulsory Purchase Order, 1938. This scheme comprises 44 houses, seven of which were closed and 36 closed and demolished at the end of the year. The condemned houses were at "The Halfway" a well-known landmark midway between Glasgow and Paisley. The tenants were accommodated in the new near-by rehousing scheme at Berryknowes.

Decrowding:—For the relief of overcrowding 451 families were rehoused in Corporation houses as compared with 380 in the previous year. Ten of these families had been in lodgings and 441 came from houses of one, two, three and four or more apartments. The numbers of overcrowded habitable houses of the foregoing sizes at the date of the overcrowding survey in 1935 were, in round numbers, 2,300, 7,200, 1,900 and 300 respectively, a total of approximately 12,700 in the Division,

Re-housing Inspection:—Occupation of the 52 houses for "rehousing" in Berryknowes Scheme was begun in June and completed in September. The houses are of three and four apartments and are occupied for the most part by tenants displaced from the uninhabitable houses in the Paisley Road West Clearance Area. This brings the rehousing schemes in the Division to five, viz.:—Whitefield Road, Broomloan Road, Teucharhill, Dunsmuir Street, and Berryknowes and the total houses, excepting two occupied by caretakers, to 1,127. The houses were regularly and frequently examined by nurse inspectors and found to be in much the same generally satisfactory condition as in former years. Five statutory notices issued regarding dirty houses and two with respect to unclean bedding were promptly attended to.

In another case, an old frail woman living alone, whose house and bedding were dirty and was herself neglected, removed voluntarily for a few days to a general hospital when the house and its contents were thoroughly cleansed at the cost of the Local Authority. Since her return

(in November, 1938) the house has been maintained in a clean condition, partly through the good offices of her neighbours. The history of the occupancy of this house includes the following details, interesting from the social and entomological points of view.

The house which is of two apartments is in a tenement in a rehousing scheme built in 1925. Its first occupants were the old woman referred to and her husband, since deceased. During the first three years of its occupancy the house was clean. As the inmates got older the house was neglected and latterly they themselves presented a very dirty appearance. The house gradually went from bad to worse until it was regarded as a notoriously dirty one and one that called for special visitation and sympathetic handling. Despite its dirty condition, bugs were never found in the house. With a view to ascertaining if the very unclean condition of the occupants was repellant to the bed bug Dr. Gunn carried out some experiments a couple of years ago from which it appeared that the extremely dirty are not immune from attack.

In March, 1939, the old woman gave up the house and went to reside with relatives. When a Corporation house in a rehousing scheme becomes vacant it is examined, as a matter of course, for potential bug-infestation by a sanitary officer before being re-let. The history of this house being so well-known a special examination was made of it when it was empty. In the course of this the door facings were removed and examined, picture rails and skirting boards stripped, all cavities in plaster inspected and the house in general meticulously inspected, and no trace of bugs was found. All of which goes to show that a new house although occupied continuously for a decade by a very dirty tenant does not necessarily become a bug infested one.

Male sanitary officers also visited the schemes to enforce the byelaws with respect to the sweeping and washing of closes and common stairs. On the whole, the byelaws are complied with, but, occasionally, the mid-week cleansing was done only after a verbal warning had been given. Regular and frequent inspection is necessary to ensure the maintenance of that high standard of cleanliness which now is the outcome of the strict application of the byelaws since the houses were first occupied.

Housing (Agricultural Population) (Scotland) Act, 1938:—Eight houses are occupied by agricultural workers; six are "tied" houses. Two houses are unfit for human habitation; both are ear-marked for demolition. Two chaumers—one occupied by two men and the other by one man—and one bothy occupied by six men were surveyed. Seasonal workers (potato harvesters) were employed at one farm. They

were lodged in private houses in Govan. Byelaws have been prepared with respect to bothies, chaumers and similar premises and for the provision of proper accommodation for seasonal workers.

Rent Restrictions Acts, 1920 to 1938 :—Fourteen applications by tenants for certificates that their houses were not in reasonable repair were granted, compared with one application in the previous year.

Sanitary Conveniences used in Common :—Another small decrease falls to be recorded in the number of water closets used in common, there being 4,256 as compared with 4,281 in the previous year; the numbers serving two, three, four and five or more families are 1,053, 1,834, 1,078 and 291 respectively. Dry closets used in common again number four and serve two tenants each; privy middens also show no change there being two, one of which serves two and the other four tenants. These conservancy conveniences are remote from sewerage facilities. Ashpits used in common were reduced by 34 to 523, of which 6 serve two tenants, 7 serve four tenants and 510 serve five or more tenants. Of the 43,274 houses in the Division at the end of the year, two only are without an inside sink and water supply—one is far from a gravitation water supply and the other is earmarked for demolition. The number with baths is 18,423 (43%).

Rat Destruction :—Rat week was observed in March and the usual intensification of the campaign in the eradication of rats was resumed on the same lines as formerly. Rat destruction is a matter of everyday routine and Rat Week serves as a reminder for the need for co-ordinated action throughout.

Offensive Trades :—The businesses of soap boiler, tallow melter tanner and hide factor carried on in separate sets of premises and in addition those of tallow melter, bone boiler and manure manufacturer, all in the same building, a total of seven, were visited frequently and found to be conducted in accordance with the requirements of the byelaws. The trade of glue and size manufacture was discontinued during the year.

The Glasgow Corporation Order, 1938, enacts among other matters, that the provisions of section 32 of the Public Health (Scotland) Act, 1897, so far as relating to byelaws as to offensive businesses shall extend to the trade or business of a fish frier.

Burial Grounds :—The three burial grounds—Govan churchyard and Craigton and Cardonald cemeteries—were inspected regularly and again found satisfactory.

JAMES REID,
Divisional Sanitary Inspector.

APPENDIX.

TABLE I.—GLASGOW, 1938—ESTIMATED POPULATION IN EACH MUNICIPAL WARD, ACREAGE, AND PERSONS PER ACRE.

MUNICIPAL WARDS.	POPULATION.				Acreage.	Persons per acre (incl. Institutions and Shipping)
	Without Institutions and Shipping.	Institutions.	Shipping.	Total.		
1. Shettleston and Tollicross ...	48,633	362	—	48,995	1,473	33
2. Parkhead ...	40,486	1,107	—	41,593	883	47
3. Dalmarnock ...	31,240	23	—	31,263	288	109
4. Calton ...	25,165	1,807	—	26,972	333	81
5. Mile-end ...	19,180	—	—	19,180	191	100
6. Whitevale ...	20,368	459	—	20,827	176	118
7. Dennistoun ...	26,608	383	—	26,991	280	96
8. Provan ...	46,157	925	—	47,082	2,935	16
9. Cowlairst ...	22,456	1,103	—	23,559	456	52
10. Springburn ...	23,567	4,554	—	28,121	4,741	6
11. Townhead ...	24,809	1,593	—	26,402	175	151
12. Exchange ...	12,765	2,350	7	15,122	289	52
13. Blythswood ...	9,728	2,513	11	12,252	242	51
14. Anderston ...	22,833	1,002	806	24,641	422	58
15. Sandyford ...	17,727	422	—	18,149	152	119
16. Park ...	21,377	555	—	21,932	272	81
17. Cowcaddens ...	32,009	720	1	32,730	488	67
18. Woodside ...	31,065	897	—	31,962	170	188
19. Ruchill ...	52,083	1,167	2	53,252	2,105	25
20. North Kelvin ...	20,636	92	—	20,728	146	142
21. Maryhill ...	27,841	860	4	28,705	2,210	13
22. Kelvinside ...	26,236	1,063	—	27,299	1,127	24
23. Partick (East) ...	25,905	1,058	—	26,963	268	101
24. „ (West) ...	22,717	43	123	22,883	357	64
25. Whiteinch ...	32,903	703	13	33,619	1,266	27
26. Hutchesontown ...	36,658	22	—	36,680	387	95
27. Gorbals ...	41,580	659	—	42,239	252	168
28. Kingston ...	27,437	190	163	27,790	285	98
29. Kinning Park ...	33,700	421	245	34,366	379	91
30. Govan ...	37,328	417	—	37,745	529	71
31. Fairfield ...	32,681	1,491	104	34,276	1,403	24
32. Pollokshields ...	41,908	2,027	—	43,935	4,837	9
33. Camphill ...	18,557	49	—	18,606	366	51
34. Pollokshaws ...	26,426	62	—	26,488	3,324	8
35. Govanhill ...	31,128	270	—	31,398	365	86
36. Langside ...	18,227	794	—	19,021	557	34
37. Cathcart ...	31,451	113	—	31,564	2,949	11
38. Yoker and Knightswood ...	32,222	273	—	32,495	2,647	12
CITY ...	1,093,797	32,549	1,479	1,127,825	39,725	28

TABLE II.—GLASGOW, 1938.—INHABITED AND UNOCCUPIED HOUSES IN EACH MUNICIPAL WARD.

MUNICIPAL WARDS.	INHABITED HOUSES*				Empty Houses.
	1938.	1937.	Decrease.	Increase.	
1. Shettleston and Tollcross	11,589	11,440	—	149	8
2. Parkhead	9,883	9,913	30	—	7
3. Dalmarnock	8,017	8,016	—	1	5
4. Calton	6,143	6,131	—	12	16
5. Mile-end	4,799	4,843	44	—	6
6. Whitevale	5,227	5,290	63	—	—
7. Dennistoun	7,008	6,972	—	36	11
8. Provan	11,549	11,146	—	403	27
9. Cowlares	6,243	5,955	—	288	4
10. Springburn	5,753	5,555	—	198	7
11. Townhead	6,056	6,069	13	—	31
12. Exchange	3,276	3,307	31	—	11
13. Blythswood	2,318	2,351	33	—	10
14. Anderston	5,713	5,825	112	—	7
15. Sandyford	4,126	4,168	42	—	13
16. Park	5,486	5,415	—	71	43
17. Cowcaddens	8,009	8,191	182	—	10
18. Woodside	8,403	8,396	—	7	12
19. Ruchill	11,847	11,702	—	145	7
20. North Kelvin	5,901	5,852	—	49	30
21. Maryhill	6,966	6,839	—	127	15
22. Kelvinside	7,957	7,694	—	263	158
23. Partick (East)	6,648	6,732	84	—	25
24. „ (West)	6,496	6,475	—	21	8
25. Whiteinch	8,666	8,522	—	144	22
26. Hutchesontown	9,655	9,653	—	2	7
27. Gorbals	9,678	9,797	119	—	26
28. Kingston	6,386	6,401	15	—	59
29. Kinning Park	8,432	8,426	—	6	11
30. Govan	8,895	8,912	17	—	6
31. Fairfield	8,177	8,179	2	—	5
32. Pollokshields	11,336	10,868	—	468	55
33. Camphill	5,804	5,767	—	37	17
34. Pollokshaws	6,960	6,494	—	466	16
35. Govanhill	8,420	8,403	—	17	7
36. Langside	5,212	5,198	—	14	9
37. Cathcart	9,258	9,192	—	66	23
38. Yoker and Knightswood	8,269	7,637	—	632	11
CITY	280,561	277,726	—	2,835	745

* Includes Inhabitant Occupiers.

TABLE III.—GLASGOW.—LININGS GRANTED BY DEAN OF GUILD COURT IN YEARS FROM 1919 TO 1938 IN RESPECT OF HOUSES.

Year ending 31st August.	NUMBER OF APARTMENTS.						TOTAL.
	1.	2.	3.	4.	5.	6.	
1919 ...	—	—	144	78	—	—	222
1920 ...	—	12	1,239	414	214	57	1,936
1921 ...	—	—	1,176	981	240	34	2,431
1922 ...	—	—	65	99	39	31	234
1923 ...	—	680	286	205	104	46	1,321
1924 ...	—	357	991	605	745	82	2,780
1925 ...	—	504	674	111	44	61	1,394
1926 ...	—	318	4,649	967	769	93	6,796
1927 ...	—	228	2,889	1,209	802	55	5,183
1928 ...	—	132	4,184	2,238	314	17	6,885
1929 ...	—	570	1,656	1,024	124	82	3,456
1930 ...	—	506	1,958	1,295	230	202	4,191
1931 ...	—	122	2,220	1,900	38	26	4,306
1932 ...	33	529	3,464	1,251	70	4	5,351
1933 ...	—	270	1,845	3,162	337	23	5,637
1934 ...	34	603	1,825	787	80	52	3,381
1935 ...	—	220	2,082	792	128	9	3,231
1936 ...	—	—	1,462	1,320	290	12	3,084
1937 ...	—	2	687	847	301	34	1,871
1938 ...	—	—	2,017	3,068	824	50	5,959

TABLE IV.—ABSTRACT OF METEOROLOGICAL OBSERVATIONS TAKEN AT SPRINGBURN PUBLIC PARK.

MONTHS. 1938.	TEMPERATURE.			RAINFALL.		SUNSHINE. Hours.
	Highest Temp. in Shade.	Lowest Temp. in Shade.	Mean Temp.	No. of Days.	Amount Collected in inches.	
January ...	53	24	39.2	26	5.62	26.7
February ...	52	28	39.5	14	1.71	49.2
March ...	60	30	46.7	21	2.85	56.1
April ...	60	29	46.2	7	0.68	162.2
May ...	65	30	49.4	19	4.36	189.4
June ...	74	43	54.6	20	5.33	169.8
July ...	71	44	57.9	19	5.20	156.3
August ...	76	42	58.2	18	2.74	158.1
September ...	75	38	54.6	22	3.82	74.0
October ...	65	33	48.4	28	8.12	69.8
November ...	58	29	44.9	25	6.55	19.8
December ...	52	20	38.1	23	2.78	42.6
1927 ...	77	20	46.8	245	49.12	1,162
1928 ...	79	20	46.8	255	49.35	1,121
1929 ...	80	14	46.3	226	43.01	1,223
1930 ...	79	20	47.7	234	42.94	1,022
1931 ...	73	19	46.5	251	43.06	1,078
1932 ...	83	25	47.3	223	42.98	1,126
1933 ...	87	20	48.4	203	29.17	1,255
1934 ...	86	24	48.5	248	39.98	1,186
1935 ...	80	15	47.2	230	43.44	1,211
1936 ...	80	17	47.2	230	40.85	1,076
1937 ...	80	15	47.0	212	31.66	1,183
1938 ...	76	20	48.1	242	49.76	1,174

TABLE V.—GLASGOW.—BIRTHS AND BIRTH-RATES *per Million* IN EACH WARD FOR THE YEAR 1938, AND NUMBER AND PERCENTAGE OF ILLEGITIMATE BIRTHS

MUNICIPAL WARDS.	Births. 1938.	Birth- rate. 1938.	Birth- rate. 1937.	Illegitimate Births.	
				No.	% Total Births.
1. Shettleston and Tollcross ...	890	18,283	20,717	25	2·8
2. Parkhead	843	20,802	21,109	44	5·2
3. Dalmarnock	809	25,872	25,371	35	4·3
4. Calton	618	24,535	24,101	31	5·0
5. Mile-end	543	28,284	26,645	34	6·3
6. Whitevale	489	23,986	24,342	22	4·5
7. Dennistoun	334	12,541	14,893	19	5·7
8. Provan	1,043	22,575	24,517	32	3·1
9. Cowlairs	535	23,802	20,776	14	2·6
10. Springburn	419	17,762	18,988	20	4·8
11. Townhead	589	23,718	22,906	54	9·2
12. Exchange	359	28,097	26,192	37	10·3
13. Blythswood	235	24,135	22,099	52	22·1
14. Anderston	566	24,765	25,146	40	7·1
15. Sandyford	330	18,598	20,905	35	10·6
16. Park	326	15,236	12,456	48	14·7
17. Cowcaddens	877	27,372	26,124	42	4·8
18. Woodside	813	26,147	24,474	65	8·0
19. Ruchill	1,002	19,220	19,720	61	6·1
20. North Kelvin	405	19,608	19,801	23	5·7
21. Maryhill	534	19,162	20,761	23	4·3
22. Kelvinside	239	9,101	7,535	12	5·0
23. Partick (East)	446	17,200	19,052	22	4·9
24. „ (West)	382	16,800	17,279	15	3·9
25. Whiteinch	494	14,999	15,169	17	3·4
26. Hutchesontown	919	25,046	27,110	35	3·8
27. Gorbals	1,253	30,106	27,957	115	9·2
28. Kingston	691	25,161	24,762	49	7·1
29. Kinning Park	854	25,317	24,656	51	6·0
30. Govan	933	24,971	27,366	46	4·9
31. Fairfield	615	18,800	18,092	25	4·1
32. Pollokshields	510	12,158	12,786	22	4·3
33. Camphill	199	10,713	11,879	5	2·5
34. Pollokshaws	375	14,177	13,446	18	4·8
35. Govanhill	508	16,305	16,537	24	4·7
36. Langside	169	9,263	10,954	8	4·7
37. Cathcart	353	11,213	12,179	11	3·1
38. Yoker and Knightswood ...	391	12,123	13,081	12	3·1
Institutions, &c.	89	—	—	14	—
CITY	21,979	19,488	19,802	1,257	5·7

TABLE VI.—GLASGOW.—DEATHS AND DEATH-RATES *per Million* IN EACH MUNICIPAL WARD, FOR THE YEAR 1938, AND CORRESPONDING RATES FOR 1937 AND 1936.

MUNICIPAL WARDS.	Deaths. 1938.	Death-rates.		
		1938.	1937.	1936.
1. Shettleston and Tollcross ...	534	10,970	12,422	12,406
2. Parkhead	468	11,549	14,269	13,226
3. Dalmarnock	469	14,999	14,471	15,987
4. Calton	412	16,356	18,076	18,528
5. Mile-end	306	15,939	17,797	16,765
6. Whitevale	300	14,715	16,566	16,557
7. Dennistoun	339	12,729	13,201	13,930
8. Provan	559	12,099	15,544	13,254
9. Cowlares	273	12,146	14,455	11,857
10. Springburn	278	11,785	12,513	11,320
11. Townhead	358	14,416	16,138	16,466
12. Exchange	240	18,784	20,088	18,509
13. Blythswood	194	19,924	20,887	17,204
14. Anderston	362	15,839	15,439	16,610
15. Sandyford	282	15,893	16,568	16,548
16. Park	316	14,769	17,930	16,003
17. Cowcaddens	445	13,889	17,456	15,962
18. Woodside	489	15,726	16,904	16,784
19. Ruchill	568	10,895	12,722	11,488
20. North Kelvin	267	12,927	14,790	12,270
21. Maryhill	292	10,478	11,765	13,001
22. Kelvinside	305	11,614	12,087	12,644
23. Partick (East)	372	14,346	15,029	14,526
24. „ (West)	251	11,039	12,926	13,424
25. Whiteinch	374	11,356	13,508	12,620
26. Hutchesontown	493	13,436	15,429	15,342
27. Gorbals	669	16,074	17,810	18,556
28. Kingston	425	15,475	16,327	16,237
29. Kinning Park	511	15,149	14,545	14,420
30. Govan	528	14,132	15,440	16,823
31. Fairfield	377	11,525	11,970	11,643
32. Pollokshields	489	11,657	11,844	12,961
33. Camphill	234	12,598	13,121	14,090
34. Pollokshaws	323	12,211	13,164	11,893
35. Govanhill	364	11,683	13,012	12,328
36. Langside	231	12,662	12,104	14,031
37. Cathcart	367	11,658	11,478	11,986
38. Yoker and Knightswood ...	296	9,177	9,869	9,929
Institutions	638	—	—	—
Harbour	18	—	—	—
CITY	15,016	13,314	14,626	14,653

TABLE VIII.—GLASGOW.—DEATHS AND DEATH-RATES *per Million* FROM DIFFERENT CAUSES, FOR THE YEAR 1938, AND CORRESPONDING RATES FOR 1937 AND 1936.

CAUSE OF DEATH.	DEATHS. 1938.	ANNUAL DEATH-RATE PER MILLION.		
		1938.	1937.	1936.
1. Typhoid and Paratyphoid Fevers ...	5	4	4	12
35A. Typhus Fever	—	—	—	—
35B. Smallpox	—	—	—	—
2. Measles	257	228	26	278
3. Scarlet Fever	29	26	26	29
4. Whooping Cough	88	78	255	105
5. Diphtheria	132	117	104	48
6. Influenza	86	76	443	129
7. Encephalitis Lethargica	23	20	21	21
8. Cerebro-spinal Fever	38	34	48	34
35C. Erysipelas	22	20	30	39
9. Tuberculosis of Respiratory System	960	851	853	874
10A. Tuberculous Meningitis	150	133	108	146
10B. Abdominal Tuberculosis	29	26	31	32
10C. Other Tuberculous Diseases	94	83	72	85
11. Syphilis	27	24	19	28
12. General Paralysis of Insane (Tabes Dorsalis)	50	44	30	38
13. Cancer, Malignant Disease	1,677	1,487	1,393	1,440
35D. Rheumatic Fever	75	67	80	71
14. Diabetes	151	134	163	163
15. Cerebral Haemorrhage, &c.	918	814	826	977
35E. Meningitis (not Tuberculous)	52	46	27	54
35F. Other Nervous Diseases	287	254	290	313
16. Heart Disease	3,083	2,733	2,953	2,851
17. Aneurysm	32	28	39	28
18A. Arterio-sclerosis	695	616	606	456
18B. Other Circulatory Diseases	170	151	147	124
19. Bronchitis	349	309	434	454
20. Pneumonia (all forms)	1,158	1,027	1,378	1,426
21. Other Respiratory Diseases	145	128	161	171
22. Peptic Ulcer	140	124	97	102
23. Diarrhoea, &c. (under 2 years)	304	270	332	417
24. Appendicitis	83	74	81	72
25. Cirrhosis of Liver	45	40	36	39
26. Other Diseases of Liver, &c.	74	66	72	67
27. Other Digestive Diseases	276	245	307	324
28. Acute and Chronic Nephritis	343	304	303	326
29. Puerperal Sepsis	50	44	45	51
30. Other Puerperal Causes	68	60	56	63
31. Congenital Debility, Premature Birth, Malformations, &c.	810	718	840	823
32. Senility	348	309	316	317
33. } Suicide and Other Deaths from				
34. } Violence	638	566	535	557
35. Other Defined Causes	744	660	732	709
36. Causes Ill-Defined or Unknown	311	276	307	360
ALL CAUSES	15,016	13,314	14,626	14,653

TABLE IX.—GLASGOW, 1938.—DEATHS FROM

CAUSE OF DEATH.	MALES.													Total Males.
	-1	-2	-5	-10	-15	-20	-25	-35	-45	-55	-65	-75	75+	
1. Typhoid and Paratyphoid Fevers	...	...	...	...	...	...	...	2	...	...	...	...	...	2
35A. Typhus Fever ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
35B. Smallpox ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Measles ...	43	60	25	3	...	...	1	1	...	...	...	...	...	133
3. Scarlet Fever ...	1	4	4	1	1	...	...	...	2	1	...	...	...	14
4. Whooping Cough ...	20	16	4	...	...	...	...	...	...	...	...	...	...	40
5. Diphtheria ...	1	3	19	23	1	...	...	...	...	...	...	1	...	48
6. Influenza ...	5	2	1	1	...	1	...	2	5	5	11	11	2	46
7. Encephalitis Lethargica ...	...	...	...	...	...	1	2	3	3	2	1	2	...	14
8. Cerebro-spinal Fever ...	9	1	4	...	2	1	...	...	1	...	...	1	...	19
35C. Erysipelas ...	3	...	...	...	...	...	...	2	1	1	1	3	1	11
9. Tuberculosis of Respiratory System ...	6	6	9	5	7	40	72	105	99	103	58	20	4	534
10A. Tuberculous Meningitis ...	4	13	22	17	9	10	3	1	...	2	1	...	...	82
10B. Abdominal Tuberculosis ...	...	...	1	2	...	3	1	2	1	2	1	...	...	13
10C. Other Tuberculous Diseases ...	7	5	6	4	1	4	4	5	2	5	2	...	...	45
11. Syphilis ...	5	...	...	...	...	...	...	1	1	6	3	4	...	20
12. General Paralysis of Insane (Tabes Dorsalis) ...	...	...	...	...	...	...	1	...	3	12	19	1	...	36
13. Cancer, Malignant Disease ...	...	...	2	...	3	5	4	18	39	107	237	263	111	789
35D. Rheumatic Fever ...	...	...	2	6	6	2	4	5	1	3	4	...	...	33
14. Diabetes ...	...	...	...	...	1	1	1	2	2	5	10	8	5	35
15. Cerebral Haemorrhage, &c. ...	1	...	1	...	1	1	...	4	11	27	106	135	102	389
35E. Meningitis (not Tuberculous) ...	16	1	2	1	...	4	...	...	2	1	4	1	...	32
35F. Other Nervous Diseases ...	26	6	3	3	2	7	7	16	20	20	20	22	13	152
16. Heart Disease ...	1	2	2	3	11	13	15	31	58	201	395	553	362	1647
17. Aneurysm ...	...	...	...	...	...	...	...	...	5	5	8	4	2	24
18A. Arterio Sclerosis ...	...	...	...	...	...	...	...	...	3	19	78	142	122	364
18B. Other Circulatory Diseases ...	...	...	...	...	...	1	1	1	2	6	23	31	19	84
19. Bronchitis ...	28	2	1	1	1	1	...	5	10	25	29	33	49	185
20. Pneumonia (all forms) ...	209	73	23	3	6	6	11	35	53	93	90	53	29	684
21. Other Respiratory Diseases ...	7	3	1	1	1	1	1	6	6	12	10	12	14	75
22. Peptic Ulcer ...	...	...	...	...	...	1	2	12	18	33	28	17	4	115
23. Diarrhoea, &c. (under 2 years) ...	180	14	...	...	...	...	...	...	...	...	...	...	...	194
24. Appendicitis ...	...	...	1	7	5	4	7	5	7	8	7	6	1	58
25. Cirrhosis of Liver ...	1	...	...	...	...	...	...	...	2	6	6	10	2	27
26. Other Diseases of Liver, &c. ...	1	...	...	...	...	...	1	2	...	3	10	7	2	26
27. Other Digestive Diseases ...	9	2	5	4	...	...	3	4	18	20	27	36	15	143
28. Acute and Chronic Nephritis ...	...	1	1	...	2	3	5	14	13	24	45	40	30	178
29. Puerperal Sepsis ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
30. Other Puerperal Causes ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
31. Congenital Debility, Premature Birth, Malformations, &c. ...	467	2	...	1	...	1	...	...	...	...	...	...	...	471
32. Senility ...	...	...	...	...	...	...	...	...	...	...	7	28	99	134
33. Suicide and other Deaths from	...	...	...	...	...	...	...	...	...	...	...	...	...	...
34. Violence ...	17	9	15	21	25	23	27	41	48	66	62	45	31	430
35. Other Defined Causes ...	39	4	6	10	7	11	4	10	23	46	70	94	66	390
36. Causes Ill-Defined or Unknown	6	3	2	2	1	...	1	3	7	28	51	59	32	195
ALL CAUSES ...	1112	232	169	119	93	145	178	327	463	897	1424	1642	1117	7911

DIFFERENT CAUSES IN SEXES AND AT SEVERAL AGE-PERIODS.

CAUSE OF DEATH.	FEMALES.														Total Females	Total Both Sexes
	-1	-2	-5	-10	-15	-20	-25	-35	-45	-55	-65	-75	75+			
1. Typhoid and Paratyphoid Fevers ... ..	...	...	...	...	1	...	...	1	...	...	1	...	...	3	5
35A. Typhus Fever ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
35B. Smallpox ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
2. Measles	31	58	29	4	...	...	1	...	...	1	...	...	...	124	257
3. Scarlet Fever	1	2	5	3	...	2	...	...	2	...	...	...	...	15	29
4. Whooping Cough	21	21	6	...	...	...	...	...	...	...	...	...	...	48	88
5. Diphtheria	4	9	29	31	8	2	...	1	...	...	...	...	...	84	132
6. Influenza	2	1	...	1	...	...	1	3	6	2	9	9	6	40	86
7. Encephalitis Lethargica ... ..	...	...	...	...	...	...	1	4	2	1	1	...	...	9	23
8. Cerebro-spinal Fever	7	3	2	...	1	3	...	1	1	...	1	...	...	19	38
35C. Erysipelas	4	1	...	...	...	...	...	...	1	1	2	2	2	11	22
9. Tuberculosis of Respiratory System	3	5	5	4	14	74	93	115	52	32	20	9	...	426	960	
10A. Tuberculous Meningitis	5	6	12	9	10	13	7	6	...	...	...	...	...	68	150
10B. Abdominal Tuberculosis	1	...	...	1	...	5	3	4	...	...	...	2	...	16	29
10C. Other Tuberculous Diseases	2	2	5	3	6	12	1	6	4	2	1	4	1	49	94	
11. Syphilis	1	...	...	...	...	1	...	...	1	2	2	...	...	7	27
12. General Paralysis of Insane (Tabes Dorsalis) ... ..	...	...	...	...	...	...	...	...	4	4	3	3	...	14	50
13. Cancer, Malignant Disease ... ..	...	...	...	...	2	...	2	16	64	155	256	246	147	888	1677
35D. Rheumatic Fever ... ..	...	...	...	7	9	6	4	4	8	4	...	...	...	42	75
14. Diabetes ... ..	...	...	...	...	1	...	...	...	4	8	48	43	12	116	151
15. Cerebral Haemorrhage, &c. ... ..	...	...	...	...	...	...	...	3	12	40	107	180	187	529	918
35E. Meningitis (not Tuberculous)	9	...	2	1	...	...	...	2	1	1	3	1	...	20	52
35F. Other Nervous Diseases	19	5	5	4	4	...	3	15	17	20	19	15	9	135	287	
16. Heart Disease	2	1	...	4	9	8	16	43	71	131	262	450	439	1436	3083	
17. Aneurysm ... ..	...	...	...	...	...	1	...	...	2	...	1	4	...	8	32
18A. Arterio Sclerosis ... ..	...	...	...	...	...	...	...	...	5	11	47	102	166	331	695
18B. Other Circulatory Diseases ... ..	...	1	...	...	...	...	...	1	7	7	29	28	13	86	170
19. Bronchitis	23	4	2	2	1	1	1	3	2	8	12	35	70	164	349	
20. Pneumonia (all forms)	178	61	25	4	3	4	13	6	25	26	31	48	50	474	1158	
21. Other Respiratory Diseases	12	1	5	...	1	...	1	2	5	4	11	14	14	70	145	
22. Peptic Ulcer ... ..	...	...	...	...	...	1	...	1	5	5	1	9	3	25	140
23. Diarrhoea, &c. (under 2 yrs.)	99	11	...	...	...	...	...	...	...	...	...	...	...	110	304
24. Appendicitis ... ..	...	...	...	3	3	4	1	1	2	3	6	1	1	25	83
25. Cirrhosis of Liver ... ..	...	...	...	...	...	...	...	...	1	5	4	7	1	18	45
26. Other Diseases of Liver, &c. ... ..	...	1	...	...	...	...	...	2	3	6	15	16	5	48	74
27. Other Digestive Diseases	8	...	4	6	2	2	4	11	10	11	24	22	29	133	276	
28. Acute and Chronic Nephritis	1	...	...	1	4	4	4	13	18	32	43	28	17	165	343
29. Puerperal Sepsis ... ..	...	...	...	...	...	4	5	23	18	...	...	...	...	50	50
30. Other Puerperal Causes ... ..	...	...	...	...	...	3	9	34	21	1	...	...	...	68	68
31. Congenital Debility, Premature Birth, Malformations,	334	3	1	1	...	...	...	...	...	...	...	...	...	339	810
32. Senility ... ..	...	...	...	...	...	...	...	...	...	...	4	33	177	214	348
33. Suicide and other Deaths ... ..	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
34. from Violence	9	6	9	12	4	4	5	15	26	28	22	34	34	208	638	
35. Other Defined Causes	27	5	5	7	8	4	7	21	32	43	63	79	53	354	744	
36. Causes Ill-Defined or Unknown	4	1	...	...	1	1	2	5	4	8	32	34	24	116	311
ALL CAUSES	807	208	151	108	92	159	184	362	435	602	1079	1458	1460	7105	15016	

TABLE X.—GLASGOW, 1938.—DEATHS OCCURRING IN INSTITUTIONS FOR THE TREATMENT OF THE SICK, NURSING HOMES, &C.

CAUSE OF DEATH.	Local Authority General Hospitals and Poorhouses.	Local Authority Fever Hospitals and Sanatoria.	Local Authority Mental Hospitals.	Voluntary Hospitals and Infirmarys.	Nursing Homes, &c.	Totals.	% of all Deaths.	Outward Transfer Deaths.
1. Typhoid and Paratyphoid Fever	—	5	—	—	—	5	100.0	—
35A. Typhus Fever	—	—	—	—	—	—	—	—
35B. Smallpox	—	—	—	—	—	—	—	—
2. Measles	4	185	—	—	—	189	73.5	8
3. Scarlet Fever	—	24	—	—	—	24	82.7	4
4. Whooping Cough	4	51	—	—	—	55	62.5	2
5. Diphtheria	1	122	—	3	—	126	95.4	19
6. Influenza	12	10	—	4	1	27	31.4	2
7. Encephalitis Lethargica ...	8	—	3	1	2	14	60.9	4
8. Cerebro-spinal Fever	2	32	—	2	—	36	94.7	10
35C. Erysipelas	2	13	2	1	—	18	81.8	4
9. Tuberculosis of Respira- tory System	124	400	13	45	2	584	60.8	37
10A. Tuberculous Meningitis ...	31	83	—	27	—	141	94.0	16
10B. Abdominal Tuberculosis ...	6	8	1	6	—	21	72.4	8
10C. Other Tuberculous Diseases	14	44	—	20	—	78	83.0	20
11. Syphilis	12	1	—	9	—	22	81.5	1
12. General Paralysis of Insane (Tubes Dorsalis)	26	—	14	—	2	42	84.0	2
13. Cancer, Malignant Disease	375	13	15	345	41	789	47.0	341
35D. Rheumatic Fever	18	2	1	26	—	47	62.6	9
14. Diabetes	30	6	—	40	8	84	55.6	51
15. Cerebral Haemorrhage, &c.	257	5	5	90	26	383	41.7	50
35E. Meningitis (not Tuberculous)	9	9	—	25	3	46	88.4	10
35F. Other Nervous Diseases ...	81	8	43	41	5	178	62.0	49
16. Heart Disease	914	40	59	189	48	1,250	40.5	136
17. Aneurysm	3	2	1	11	—	17	53.1	7
18A. Arterio-sclerosis	251	3	20	32	14	320	46.0	24
18B. Other Circulatory Diseases	45	—	3	35	—	83	48.8	27
19. Bronchitis	56	11	2	51	6	126	36.1	25
20. Pneumonia (all forms) ...	179	469	13	90	8	759	65.5	96
21. Other Respiratory Diseases	40	13	3	17	3	76	51.7	19
22. Peptic Ulcer	14	—	—	93	5	112	80.0	59
23. Diarrhoea, &c. (under 2 yrs.)	149	15	—	59	4	227	74.7	30
24. Appendicitis	7	2	—	67	4	80	96.4	62
25. Cirrhosis of Liver	13	—	—	11	2	26	57.8	6
26. Other Diseases of Liver, &c.	19	—	—	25	4	48	64.9	32
27. Other Digestive Diseases ...	58	11	2	116	12	199	72.1	113
28. Acute and Chronic Nephritis	105	3	5	79	8	200	58.3	51
29. Puerperal Sepsis	8	35	—	6	1	50	100.0	6
30. Other Puerperal Causes ...	21	—	—	36	2	59	86.7	15
31. Congenital Debility, Prema- ture Birth, Malformations, &c.	247	10	—	178	19	454	56.0	86
32. Senility	118	—	2	6	13	139	39.9	9
33. Suicide and other Deaths								
34. from Violence	41	4	3	261	7	316	49.5	149
35. Other Defined Causes	186	23	11	235	28	483	64.8	228
36. Causes Ill-defined or Un- known	24	—	—	14	3	41	13.2	10
YEAR, 1938	3,514	1,662	221	2,296	281	7,974	53.1	1,837
YEAR, 1937	3,979	1,768	182	2,559	230	8,718	53.2	2,013

TABLE XI.—GLASGOW, 1938.—DEATHS OF PERSONS WITH INSTITUTIONAL OR HARBOUR ADDRESS ONLY WITHIN THE CITY, ARRANGED ACCORDING TO USUAL RESIDENCE AS REGISTERED. (OUTWARD TRANSFERS EXCLUDED.)

CAUSE OF DEATH.	Staff with Acquired Insti- tutional Resi- dence.	OTHER THAN STAFF.					Total.
		Corporation General and Mental Hospitals and Poor- houses.	Model Lodging Houses.	Other Institutions	Residence outwith Glasgow, but not transferable	Residence outwith Scotland, and not transferable	
1. Typhoid and Paratyphoid Fevers	—	—	—	—	—	—	—
35A. Typhus Fever	—	—	—	—	—	—	—
35B. Smallpox	—	—	—	—	—	—	—
2. Measles	—	2	—	3	1	2	8
3. Scarlet Fever	—	—	—	—	1	—	1
4. Whooping Cough	—	—	—	—	—	—	—
5. Diphtheria	1	—	—	—	1	—	2
6. Influenza	—	—	4	—	1	—	5
7. Encephalitis Lethargica ...	—	—	—	—	—	—	—
8. Cerebro Spinal Fever ...	—	—	1	—	—	—	1
35C. Erysipelas	—	—	—	—	—	—	—
9. Tuberculosis of Respiratory System	2	1	42	2	—	5	52
10A. Tuberculous Meningitis ...	—	—	—	—	—	—	—
10B. Abdominal Tuberculosis ...	—	—	1	—	—	—	1
10C. Other Tuberculous Diseases	1	—	1	—	—	—	2
11. Syphilis	—	—	—	—	—	—	—
12. General Paralysis of Insane (Tabes Dorsalis) ...	—	2	1	—	—	1	4
13. Cancer, Malignant Disease	—	3	31	4	—	3	41
35D. Rheumatic Fever	—	—	1	—	—	—	1
14. Diabetes	—	1	1	2	—	1	5
15. Cerebral Haemorrhage, &c.	—	8	27	9	—	2	46
35E. Meningitis (not Tuberculous)	—	—	1	—	—	3	4
35F. Other Nervous Diseases ...	—	5	5	—	1	—	11
16. Heart Disease	—	13	165	19	1	4	202
17. Aneurysm	—	—	—	—	—	—	—
18A. Arterio-sclerosis	—	15	19	4	—	1	39
18B. Other Circulatory Diseases	—	1	2	—	—	1	4
19. Bronchitis	—	2	13	8	2	—	25
20. Pneumonia (all forms) ...	—	1	18	1	—	3	23
21. Other Respiratory Diseases	—	2	4	—	—	2	8
22. Peptic Ulcer	—	—	3	—	—	1	4
23. Diarrhoea, &c. (under 2 yrs).	—	1	—	—	—	—	1
24. Appendicitis	—	—	1	—	—	4	5
25. Cirrhosis of Liver	—	1	3	—	—	1	5
26. Other Diseases of Liver, &c.	—	—	3	—	—	1	4
27. Other Digestive Diseases	—	1	6	2	—	2	11
28. Acute and Chronic Nephritis	—	1	5	—	—	—	6
29. Puerperal Sepsis	—	—	—	—	—	—	—
30. Other Puerperal Causes ...	—	—	—	—	—	—	—
31. Congenital Debility, Premature Birth, Malformations, &c.	—	—	—	3	—	1	4
32. Senility	—	2	15	8	—	—	25
and 33. Suicide and other Deaths from Violence	1	1	32	2	—	8	44
34. Other Defined Causes	2	4	14	4	—	7	31
36. Causes Ill-Defined or Unknown	—	—	28	2	—	1	31
ALL CAUSES	7	67	447	73	8	54	656

TABLE XII.—GLASGOW.—DEATHS UNDER 1 YEAR AND DEATH-RATES PER 1,000 BIRTHS IN EACH MUNICIPAL WARD, FOR THE YEAR 1938.

MUNICIPAL WARDS.	Deaths —1 Year.	Death Rate per 1,000 Births.		
	1938.	1938.	1937.	1936.
1. Shettleston and Tollcross	68	76	87	79
2. Parkhead	65	77	129	104
3. Dalmarnock	97	120	90	114
4. Calton	70	113	128	143
5. Mile-end	63	116	141	139
6. Whitevale	41	84	117	151
7. Dennistoun	25	75	114	117
8. Provan	89	85	106	102
9. Cowlairs	38	71	96	64
10. Springburn	27	64	111	95
11. Townhead	48	81	119	144
12. Exchange	47	131	174	121
13. Blythwood	27	115	169	166
14. Anderston	56	98	121	125
15. Sandyford	37	112	117	111
16. Park	30	92	114	137
17. Cowcaddens	73	83	151	98
18. Woodside	82	101	107	99
19. Ruchill	82	82	105	119
20. North Kelvin	19	47	84	63
21. Maryhill	45	84	72	113
22. Kelvinside	13	54	42	66
23. Partick (East)	44	99	82	103
24. „ (West)	18	47	71	70
25. Whiteinch	31	63	97	95
26. Hutchesontown	83	90	115	122
27. Gorbals	130	104	137	157
28. Kingston	66	96	120	160
29. Kinning Park	84	98	96	112
30. Govan	105	113	103	129
31. Fairfield	52	85	81	97
32. Pollokshields	25	49	50	59
33. Camphill	12	60	41	53
34. Pollokshaws	33	88	72	64
35. Govanhill	40	79	91	82
36. Langside	9	53	25	48
37. Cathcart	17	48	39	47
38. Yoker and Knightswood	19	49	49	71
Institutions	8	—	—	—
Harbour	1	—	—	—
CITY	1,919	87	104	109

TABLE XIII.—GLASGOW, 1938.—MALE INFANT DEATHS AT GIVEN AGES AND FROM SEVERAL CAUSES.

CAUSE OF DEATH.	AGE IN WEEKS.				Total —4 weeks	AGE IN MONTHS.										Total —1 year.	
	—1	—2	—3	—4		—2	—3	—4	—5	—6	—7	—8	—9	—10	—11	—12	
I CONGENITAL MALFORMATIONS	22	4	9	4	39	15	8	1	4	—	1	1	—	2	—	1	72
II. DISEASES OF EARLY INFANCY—																	
(a) Congenital Debility, Sclerema, and Icterus	34	9	6	5	54	10	7	4	3	4	1	1	—	1	—	—	85
(b) Premature Birth	169	23	20	10	222	10	2	1	1	—	—	—	—	—	—	—	236
(c) Injury at Birth	35	2	1	—	40	1	2	—	1	—	—	—	—	—	—	—	44
(d) Atelectasis	10	2	1	—	13	2	4	—	—	—	—	—	—	—	1	—	20
(e) Others	3	3	3	1	10	—	35	28	27	26	23	17	19	13	8	9	10
III. DISEASES OF RESPIRATORY SYSTEM	1	6	6	4	17	22	—	—	—	—	—	—	—	—	—	—	244
IV. DISEASES OF DIGESTIVE SYSTEM—																	
(a) Diarrhoeal	3	2	7	2	14	25	33	27	33	11	12	6	9	3	2	5	180
(b) Others	—	—	—	1	1	2	3	1	1	—	1	—	—	1	1	—	11
(c) Others	4	4	2	5	15	7	3	4	—	—	3	2	1	2	3	2	43
V. DISEASES OF NERVOUS SYSTEM	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6
VI. TUBERCULOUS DISEASES—																	
(a) Pulmonary Tuberculosis	—	—	—	—	—	—	—	—	—	—	—	1	3	—	1	—	4
(b) Tuberculous Meningitis	—	—	—	—	—	—	—	—	—	—	—	1	1	—	—	—	7
(c) Abdominal Tuberculosis	—	—	—	—	—	—	—	—	—	—	—	1	1	2	1	—	—
(d) Other Forms	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
VII. INFECTIOUS DISEASES—																	
(a) Measles	—	—	—	—	—	—	—	—	2	1	6	4	7	10	5	8	43
(b) Scarlet Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1
(c) Whooping Cough	—	1	—	—	1	3	1	3	2	1	1	3	—	3	—	2	20
(d) Diphtheria	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	1
(e) Erysipelas	1	1	—	—	2	—	1	—	—	—	—	—	—	—	—	—	3
(f) Cerebro-spinal Fever	—	—	—	—	—	—	2	—	2	—	—	1	1	2	2	—	9
(g) Varicella	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1
(h) Typhoid and Paratyphoid Fevers	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
VIII. SYPHILIS	1	—	—	—	1	2	2	—	—	—	—	—	—	—	—	—	5
IX. OVERLAYING	—	—	1	—	1	1	3	—	—	—	—	—	—	—	—	—	5
X. OTHER VIOLENCE	3	—	—	1	4	—	1	3	1	2	—	—	—	—	—	—	12
XI. ALL OTHER CAUSES	1	6	4	2	13	4	7	10	2	3	2	4	1	1	3	—	50
TOTALS	287	63	61	36	447	104	114	82	81	48	50	42	43	41	28	32	1,112

TABLE XIV.—GLASGOW, 1938.—FEMALE INFANT DEATHS AT GIVEN AGES AND FROM SEVERAL CAUSES.

CAUSE OF DEATH.	AGE IN WEEKS.				Total —4 weeks	AGE IN MONTHS.										Total —1 year.
	AGE IN WEEKS.					AGE IN MONTHS.										
	-1	-2	-3	-4		-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12
I. CONGENITAL MALFORMATIONS	22	6	10	6	44	3	3	1	2	4	2	—	1	—	1	62
II. DISEASES OF EARLY INFANCY—																
(a) Congenital Debility, Sclerema, and Icterus	24	9	1	2	36	4	5	1	2	—	1	—	—	—	—	49
(b) Premature Birth	121	22	15	6	164	11	4	—	—	—	—	—	—	—	—	179
(c) Injury at Birth	19	2	1	—	22	2	—	—	—	—	—	—	—	—	—	24
(d) Atelectasis	6	—	—	—	6	2	3	—	—	—	—	—	—	—	—	11
(e) Others	4	1	—	4	9	4	—	—	—	—	—	—	—	—	—	9
III. DISEASES OF RESPIRATORY SYSTEM	3	10	9	4	26	14	19	11	20	19	23	20	16	11	18	213
IV. DISEASES OF DIGESTIVE SYSTEM—																
(a) Diarrhoeal	1	2	5	1	9	13	12	14	13	9	8	9	7	4	1	99
(b) Others	1	—	—	—	1	—	2	—	2	1	1	1	1	2	—	8
V. DISEASES OF NERVOUS SYSTEM	3	2	2	3	10	7	3	—	—	—	—	—	—	—	1	28
VI. TUBERCULOUS DISEASES—																
(a) Pulmonary Tuberculosis	—	—	—	—	—	—	1	—	—	2	1	—	—	1	—	3
(b) Tuberculous Meningitis	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5
(c) Abdominal Tuberculosis	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1
(d) Other Forms	—	—	—	—	—	—	—	—	—	—	1	—	—	—	1	2
VII. INFECTIOUS DISEASES—																
(a) Measles	—	—	—	—	—	—	—	—	1	—	1	5	4	5	10	31
(b) Scarlet Fever	—	—	—	—	—	—	—	—	—	—	1	1	1	—	—	1
(c) Whooping Cough	—	—	—	—	—	—	1	1	2	2	1	2	3	4	1	21
(d) Diphtheria	—	—	—	—	—	—	1	1	—	—	—	—	—	—	—	4
(e) Erysipelas	—	1	—	2	3	1	1	—	—	2	1	—	1	1	—	7
(f) Cerebro-spinal Fever	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(g) Varicella	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
(h) Typhoid and Paratyphoid Fevers	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	1
VIII. SYPHILIS	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
IX. OVERLAYING	—	—	—	—	—	—	3	—	1	—	—	—	—	—	—	5
X. OTHER VIOLENCE	1	—	—	—	1	—	—	2	—	—	—	—	—	1	—	4
XI. ALL OTHER CAUSES	1	1	3	3	8	3	5	4	5	5	3	—	—	—	2	36
TOTALS	206	56	46	31	339	65	60	36	51	44	44	38	34	30	31	807

TABLE XV.—GLASGOW, 1936-1938.—ABSTRACT OF NOTIFICATIONS UNDER NOTIFICATION OF BIRTHS ACT, 1907, AND RESULTS OF VISITS.

	1938.	1937.	1936.
Total Number of Notifications	23,133	23,284	23,488
Doctor at Home	4,921	4,988	4,966
Doctor in Institution	7,586	7,392	7,225
Maternity Hospital (Outdoor) Nurse ...	4,495	4,454	4,641
Certified Midwife	6,115	6,436	6,634
Others	16	14	22
Total Cards issued	18,212	18,296	18,522
Total Cards returned	18,288	18,370	18,731
Full Information	17,969	17,997	18,251
Doctor found in Attendance	---	5	9
Others	319	368	470

TABLE XVI.—GLASGOW, 1936-1938.—BIRTHS NOTIFIED SHOWING MEDICALLY AND NOT MEDICALLY ATTENDED.

	1938.	1937.	1936.
Notifications Received— <i>less Duplicates</i> —			
Total	23,133	23,284	23,488
Live-births	22,143	22,334	22,442
Still-births	990	950	1,046
Per cent. Still-births to Total	4.2	4.0	4.4
Medically attended—			
Births at Home	4,921	4,988	4,966
In Institutions	7,586	7,392	7,225
Total	12,507	12,380	12,191
Per cent.	54.0	53.1	51.9
Still-births at Home	179	166	201
Still-births in Institutions	533	526	539
Not Medically attended—			
Maternity Hospital (Outdoor) Nurse ...	4,495	4,454	4,641
Certified Midwives	6,115	6,436	6,634
Others	16	14	22
Total	10,626	10,904	11,297
Per cent.	45.9	46.8	48.1
Still-births	278	258	306

TABLE XVII.—GLASGOW, 1937 AND 1938.—CASES OF INFECTIOUS DISEASES REGISTERED AND NUMBERS OF THESE TREATED IN FEVER HOSPITALS, &C.*

	1938.					1937.				
	Fever Hospitals and Sanatoria.	Corporation General Hospitals.	Other Institutions.	Home.	Total.	Fever Hospitals and Sanatoria.	Corporation General Hospitals.	Other Institutions.	Home.	Total.
A.—Notifiable—										
Typhus Fever	—	—	—	—	—	—	—	—	—	—
Enteric Fever	23	—	1	4	28	16	—	—	4	20
Paratyphoid B	28	—	1	—	29	50	—	1	—	51
Continued and Undefined Fever	3	—	—	—	3	—	1	—	3	4
Puerperal Fever	425	59	23	21	528	393	85	36	21	535
Puerperal Pyrexia	63	47	99	79	288	98	51	114	66	329
Smallpox	—	—	—	—	—	—	—	—	—	—
Scarlet Fever	3,534	1	3	509	4,047	5,087	4	2	508	5,601
Diphtheria and Membranous Croup	2,797	1	2	37	2,837	2,291	4	9	26	2,330
Erysipelas	604	7	6	352	969	667	4	3	364	1,038
Cholera	—	—	—	—	—	—	—	—	—	—
Cerebro-spinal Fever ...	81	—	5	2	88	97	1	5	3	106
Ophthalmia Neonatorum	39	18	18	702	777	47	5	34	710	796
Trachoma	—	5	—	10	15	—	2	—	13	15
Acute Enceph. Lethargica	—	—	—	—	—	1	—	—	—	1
Chronic " "	—	2	—	6	8	—	15	—	14	29
Acute Polio-Encephalitis	1	—	—	—	1	—	1	—	—	1
Acute Poliomyelitis ...	31	—	9	2	42	—	—	1	—	1
Acute Primary Pneumonia	3,080	183	155	1,918	5,336	3,147	314	251	2,148	5,860
Acute Influenzal Pneumonia	69	1	2	43	115	221	20	19	302	562
Malaria	5	1	—	5	11	3	1	—	10	14
Dysentery	90	41	28	103	262	145	65	8	55	273
Infective Jaundice	—	—	1	—	1	—	—	3	—	3
Anthrax	3	—	—	—	3	1	—	—	—	1
Pulmonary Tuberculosis	1,149	—	—	599	1,748	1,133	—	—	521	1,654
Other Forms of Tuberculosis	391	—	—	309	700	330	—	—	312	642
B.—Not Notifiable—										
Measles	1,355	61	6	14,417	15,839	256	11	1	2,004	2,272
German Measles	49	1	—	439	489	23	—	—	184	207
Whooping Cough	305	3	—	3,819	4,127	697	2	2	8,014	8,715
Chickenpox	193	10	4	6,138	6,345	218	3	1	6,003	6,225
Mumps	14	—	—	—	14	16	—	—	—	16
Pemphigus Neonatorum	22	—	—	10	32	29	—	—	4	33
Totals	14,354	441	363	29,524	44,682	14,966	589	490	21,289	37,334
Notified, but diagnosis altered to Non-Infectious Diseases ...	1,620	2	1	7	1,630	1,607	—	—	3	1,610
Total Registered	15,974	443	364	29,531	46,312	16,573	589	490	21,292	38,944

* Where patients suffer from two or more diseases, each disease is reckoned as a case.

† Notified for the first time during year.

Apart from cases of pneumonia admitted to Corporation General Hospitals and Voluntary Institutions in times of pressure; cases of puerperal fever, puerperal pyrexia, and ophthalmia neonatorum occurring in other than Fever Hospitals and allowed to remain; and cases of trachoma treated in Stobhill Hospital; the cases shown under the headings "Corporation General Hospitals" and "Other Institutions" are, for the most part, accidental.

TABLE XVIII.—GLASGOW, 1934-1938.—CASE-RATES *per Million*
FOR INFECTIOUS DISEASES.

	CASE RATES PER MILLION.				
	1938.	1937.	1936.	1935.	1934.
A.—Notifiable—					
Typhus Fever	—	—	—	—	—
Enteric Fever and Paratyphoid B.	51	63	195	164	39
Continued and Undefined Fever	3	4	2	4	2
Puerperal Fever	468	478	447	526	555
Puerperal Pyrexia	255	294	197	226	286
Smallpox	—	—	—	—	—
Scarlet Fever	3,588	5,001	3,845	3,605	5,336
Diphtheria and Membranous					
Croup	2,515	2,081	1,749	2,207	2,374
Erysipelas	859	927	873	906	996
Cholera	—	—	—	—	—
Cerebro-spinal Fever	78	94	66	74	85
Ophthalmia Neonatorum ...	689	711	631	671	720
Trachoma	13	13	12	16	15
Acute and Chronic Encephalitis					
Lethargica	7	27	12	13	7
Acute Polio-Encephalitis ...	1	1	—	—	—
Acute Poliomyelitis	37	1	23	2	8
Acute Primary Pneumonia ...	4,731	5,233	5,205	5,151	5,785
Acute Influenzal-Pneumonia ...	102	502	186	362	269
Malaria	10	12	12	12	21
Dysentery	232	244	213	120	59
Infective Jaundice	1	3	2	—	—
Pulmonary Tuberculosis ...	1,550	1,477	1,471	1,569	1,475
Other Forms of Tuberculosis ...	621	573	635	602	609
B.—Not Notifiable—					
Measles	14,044	2,029	18,038	798	22,056
German Measles	434	185	1,458	376	159
Whooping-cough	3,659	7,782	3,790	6,944	5,321
Chickenpox	5,626	5,559	6,118	5,158	5,028
Others	44	44	68	62	20
Totals	39,618	33,338	45,248	29,568	51,225

TABLE XIX.—

CASES OF INFECTIOUS DISEASE REGISTERED IN EACH MONTH—SHOWING

	Typhus Fever.		Enteric including Paratyphoid Fever.		Continued and Undefined Fever		Puerperal Fever		Puerperal Pyrexia.		Smallpox.		Scarlet Fever.		Diphtheria and Membranous Group.		Erysipelas.		Cerebro-spinal Fever.		Ophthalmia Neonatorum		Trachoma.		Acute Encephalitis Lethargica		Acute Polio-Encephalitis.		Acute Poliomyelitis.	
	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.
Jan. ...	—	—	6	1	—	—	40	3	8	12	—	—	364	46	233	6	57	48	9	1	1	56	—	3	—	—	1	—	—	—
Feb. ...	—	—	3	—	1	—	26	12	3	18	—	—	330	28	207	2	56	34	8	—	5	58	—	1	—	2	—	—	—	—
March	—	—	—	1	—	—	36	12	9	21	—	—	337	42	269	6	48	31	7	4	—	91	—	3	—	—	—	—	—	—
April ...	—	—	4	—	—	—	37	9	7	22	—	—	310	29	239	5	47	28	5	—	4	69	—	1	—	—	—	—	—	1
May ...	—	—	6	2	1	—	39	10	8	17	—	—	341	25	189	4	58	27	11	—	5	63	—	3	—	1	—	—	—	—
June ...	—	—	2	—	—	—	43	2	11	17	—	—	303	26	213	5	43	29	12	1	3	69	—	1	—	1	—	—	—	4
July ...	—	—	1	—	—	—	29	5	3	21	—	—	212	17	142	1	34	19	6	—	5	73	—	—	—	—	—	—	—	11
August	—	—	6	1	—	—	35	4	1	12	—	—	241	23	148	2	34	17	2	—	1	31	—	—	—	1	—	—	—	8
Sept. ...	—	—	7	1	1	—	27	10	4	23	—	—	293	32	211	—	36	25	5	—	5	48	—	—	—	—	—	—	—	3
October	—	—	12	—	—	—	39	13	3	23	—	—	249	105	310	1	71	34	4	—	3	73	—	1	—	3	—	—	—	3
Nov. ...	—	—	3	—	—	—	38	15	3	16	—	—	290	79	353	5	62	35	3	1	5	51	—	2	—	—	—	—	—	—
Dec. ...	—	—	1	—	—	—	36	8	3	23	—	—	264	61	283	3	58	38	9	—	2	56	—	—	—	—	—	—	—	1
	—	—	51	6	3	—	425	103	63	225	—	—	3534	513	2797	40	604	365	81	7	39	738	—	15	—	8	1	—	31	1

* 1 Infective Jaundice ; 3 Anthrax ; 14 Mumps ; 32 Pemphigus Neonatorum

GLASGOW.

NUMBERS TREATED IN FEVER HOSPITALS DURING 1938.

Acute Primary Pneumonia.		Acute Influenzal Pneumonia.		Malaria.		Dysentery.		Pulmonary Tuberculosis.		Tuberculosis.		Measles.		German Measles.		Whooping-cough.		Chickenpox.		TOTALS.	
Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.	Hosp.	Others.
315	266	4	12	—	—	15	49	87	34	37	24	304	3463	2	16	5	69	30	858	1518	4967
197	195	5	1	—	—	5	35	102	32	30	18	336	4539	3	22	4	51	16	791	1337	5839
289	194	10	3	—	—	4	13	148	55	36	29	403	4345	1	33	10	116	22	1154	1629	6153
253	126	8	4	—	—	11	18	129	54	51	31	180	1273	2	36	11	121	15	729	1319	2555
353	173	9	5	—	—	8	14	122	58	44	39	96	543	18	87	7	198	16	685	1331	1954
255	121	3	1	—	—	4	7	119	58	36	28	18	190	13	170	16	163	13	691	1111	1583
154	81	4	2	3	1	6	5	70	34	34	22	3	19	4	19	20	54	20	37	761	412
123	57	6	1	1	1	11	3	92	44	29	19	4	9	1	8	35	225	5	46	783	507
161	64	3	—	—	1	15	9	83	44	28	17	6	30	2	11	28	494	11	170	929	982
297	153	3	3	—	—	7	3	76	55	22	19	2	28	—	17	32	447	14	333	1147	1311
396	507	6	7	—	—	1	13	73	48	30	22	—	24	2	13	61	861	10	305	1336	2004
282	319	8	7	1	3	3	3	48	83	14	41	3	21	1	8	76	1023	21	353	1114	2050
3080	2256	69	46	5	6	90	172	1149	599	391	309	1355	14484	49	440	305	3822	193	6152	14315	30317

Add—* Others ... 30 11

Altered Diagnosis ... 1620 10

15974 30338

TABLE XX.—HOSPITAL BED ACCOMMODATION FOR INFECTIOUS DISEASES
IN GLASGOW SINCE 1865 (EXCLUDING TUBERCULOSIS).

YEAR.	PARISH.			Glasgow Royal Infirmary.	LOCAL AUTHORITY.						Total Beds.	Population in Thousands.	Beds per
	City.	Barony.	Govan.		Parliamen- tary Road.	Belvidere Fever.	Belvidere Smallpox.	Ruchill.	Shieldhall.	Knights- wood.			
1865	100	120	54	200	136	—	—	—	—	—	610	428	1
1866	100	120	54	175	136	—	—	—	—	—	585	438	1
1867	—	120	54	100	136	—	—	—	—	—	410	446	0
1869	—	120	54	135	136	—	—	—	—	—	445	464	1
1870	—	120	54	100	250	250	—	—	—	—	774	471	1
1872	—	120	—	100	250	250	—	—	—	—	720	495	1
1875	—	—	—	100	250	250	—	—	—	—	600	500	1
1876	—	—	—	—	250	250	—	—	—	—	500	502	1
1878	—	—	—	—	120	250	150	—	—	—	520	507	1
1880	—	—	—	—	120	250	150	—	—	—	520	510	1
1881	—	—	—	—	120	370	150	—	—	—	640	512	1
1882	—	—	—	—	120	220	150	—	—	—	490	518	1
1887	—	—	—	—	120	390	150	—	—	—	660	545	1
1893	—	—	—	—	200	390	150	—	—	—	740	678	1
1900	—	—	—	—	200	390	150	440	—	—	1,180	744	1
1901	—	—	—	—	200	390	220	440	—	—	1,250	764	1
1906	—	—	—	—	—	390	220	440	—	—	1,050	836	1
1910	—	—	—	—	—	390	220	542	—	—	1,152	884	1
1913	—	—	—	—	—	390	220	542	100	81	1,333	1,032	1
1915	—	—	—	—	—	390	220	542	100	10	1,262	1,035	1
1923	—	—	—	—	—	610	—	542	100	114	1,366	1,074	1
1925	—	—	—	—	—	610	—	542	100	134	1,386	1,090	1
1926	—	—	—	—	—	610	—	542	120	134	1,406	1,090	1
1929	—	—	—	—	—	610	—	542	100	170	1,422	1,089	1
1938	—	—	—	—	—	*642	—	542	100	170	1,454	1,128	1

* Ward for Venereal Diseases with 24 beds not included.

Smallpox accommodation (20 beds) is provided at Robroyston Hospital, and in the event of an epidemic of smallpox the tuberculosis wards of Robroyston Auxiliary Hospital (100 beds) would be utilised in the first place, and, if necessary, the wards of the main hospital.

At Robroyston Hospital, Puerperal Fever accommodation (56 beds) has been provided since October, 1930; and accommodation for abortion cases (10 beds) since February, 1934.

The City has also a part interest in Lightburn Hospital (about 8 beds). During 1935, the City gave up its interest in Darnley and Blawarthill Hospitals, although arrangements still continue under which cases from the Glasgow area formerly served by the hospitals are still admitted for treatment.

TABLE XX.—(Continued).

INSTITUTIONAL ACCOMMODATION FOR FEVER AND TUBERCULOSIS PATIENTS:—

			Fever.	Tuberculosis.	Total.
Belvidere Hospital	...	...	*666	—	666
Ruchill Hospital	...	...	542	272	814
Shieldhall Hospital	...	...	100	—	100
Knightswood Hospital	...	...	170	88	258
Bellefield Sanatorium	...	...	—	108	108
Robroyston Sanatorium	...	...	86	482	568
Mearns Kirk Sanatorium	...	...	—	500	500
Baird Street Reception House	...	...	†24	—	24
			<hr/> 1,588	<hr/> 1,450	<hr/> 3,038
Stobhill General Hospital	...	...	—	92	92
Southern General Hospital	...	...	—	4	4
Western District Hospital	...	...	—	1	1
Barnhill Institution	...	...	—	23	23
			<hr/> —	<hr/> 120	<hr/> ‡120
Beds in Corporation Institutions			<hr/> 1,588	<hr/> 1,570	<hr/> 3,158
Lightburn Hospital	...	...	3	—	3
Blawarthill Hospital	...	...	3	—	3
Darnley Hospital	...	...	—	—	—
Bridge of Weir Sanatorium	...	...	—	74	74
Ochil Hills Sanatorium	...	...	—	41	41
Lanfane Home	...	...	—	28	28
Glenlomond Sanatorium	...	...	—	9	9
Tornadee Sanatorium	...	...	—	3	3
Beds in other Institutions	...	...	<hr/>6	<hr/> 155	<hr/> ‡161
TOTAL	...	...	<hr/>1,594	<hr/> 1,725	<hr/> 3,319

* Accommodation for Venereal Disease (24 beds) included.

† Accommodation for Venereal Disease and Ophthalmia Neonatorum (24 beds).

‡ Average daily number occupied during 1938.

TABLE XX (A).
NUMBER OF BEDS IN GENERAL HOSPITALS SHOWING PRESENT NETT ACCOMMODATION AVAILABLE.

	TABLE (1).			TABLE (2).			TABLE (3).					
	Standard Accommodation.			Accommodation Not Available.			Nett Accommodation Available.					
	Males.	Females.	Total.	Males.	Females.	Cots.	Total.	Males.	Females.	Cots.	Total.	
Stobhill Hospital	...	659	719	559*	—	73	48	121†	659	646	511	1,816
Southern General Hospital	...	553	562	89	136	95	20	251§	417	467	69	953
Eastern District Hospital	...	140	156	34	1	9	—	10||	139	147	34	320
Western District Hospital	...	113	116	38	—	—	—	—	113	116	38	267
Total	...	1,465	1,553	720	137	177	68	382	1,328	1,376	652	3,356

* Includes 70 cots in Marion Reid Home.

† Two female medical wards (Nos. 4B and 6B) and one healthy children's ward (No. 32) used as nurses' dormitories.

‡ Excludes certified lunatic wards with 389 beds.

§ Excludes Ward 6, three beds in side room, used as eye examination room; Ward 14, two beds in side room used for isolation of maternity cases; Ward 13, 20 cots during alteration of X-Ray room on flat below; Wards 20 to 55, 133 male and 93 female beds in portions of old central block, previously used for able-bodied and/or certain types of chronic sick persons and mental defectives, out of use in consequence of reconstruction.

|| Excludes eight female medical beds in Ward D.B. now used as clinic, and one male and one female medical bed in side room used as receiving room.

a Includes additional cots in maternity wards.

TABLE XX (B).
NUMBER OF BEDS ON EIGHT-FEET CENTRE BASIS.

	Standard Accommodation.			Accommodation Not Available.			Nett Accommodation Available.		
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
Stobhill Hospital	584	699	420	—	70	38	584	629	382
Southern General Hospital	510	488	12	133	82	12	377	406	—
Eastern District Hospital	118	133	—	2	5	7	116	128	—
Western District Hospital	93	91	—	—	—	—	93	91	—
Total	1,305	1,411	432	135	157	50	1,170	1,254	382
			3,148						2,806

TABLE XX (c).
NETT NUMBER OF BEDS IN GENERAL HOSPITALS ARRANGED IN GROUPS.

	Medical.			Surgical.			Skin, Eye, and Ear, Nose and Throat.			Mental and Post Encephalitis.			Phthisis			A.N., Mat., and Gyn.			Children			Total			Grand Total.
	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	F.	Ch.	M.	Sick	Healthy	M.	F.	Ch.	
Stobhill	...	231	225	36	150	75	12	103	65	57	137	136	5	38	—	1	145	62	144	194	659	646	511	1,816	
S.G.H.	...	212	273	16	72	36	9	33	29	7	100	28	—	—	—	—	101	37	—	—	417	467	69	953	
E.D.H.	...	88	60	15	26	26	—	—	—	—	25	25	—	—	—	—	36	19	—	—	139	147	34	320	
W.D.H.	...	86	44	16	21	17	6	6	6	—	—	—	—	—	—	—	49	16	—	—	113	116	38	267	
Total	...	617	602	83	269	154	27	142	100	64	262	189	5	38	—	1	331	134	144	194	1,328	1,376	652	3,356	

TABLE XXI.—SHOWING NUMBERS, AVERAGE RESIDENCE AND COST OF TREATMENT OF PATIENTS DURING THE YEAR ENDED 31st MAY, 1938.

COST OF TREATMENT OF PATIENTS (Ordinary Expenditure, as per Public Health Account and Lunacy and Mental Deficiency Account, excluding Interest and Sinking Fund Charges, and less Revenue Items received otherwise than for the treatment of patients).

1. Fever Hospitals and Sanatoria—

Belvidere	...	...	...	...	£71,177	3	7
Ruchill	...	...	...	...	104,008	4	8
Shieldhall	...	...	...	...	16,079	17	10
Knightswood	...	...	...	...	32,996	14	8
Robroyston	...	...	...	...	50,094	3	3
Bellefield	...	...	...	...	14,564	16	2
Mearns Kirk	...	...	...	...	48,569	13	4
					£337,490 13		

2. General Hospitals—

Stobhill	...	...	...	...	£190,502	1	6
Eastern District	...	...	...	...	36,006	4	8
Western District	...	...	...	...	30,090	2	3
Southern General	...	...	...	...	137,344	11	9
					£393,943 0		

3. Mental Hospitals—

Woodilee	...	...	...	...	£85,056	10	2
Gartloch	...	...	...	...	62,920	4	8
Hawkhead	...	...	...	...	81,070	17	0
Stoneyetts	...	...	...	...	22,117	6	4
Lennox Castle	...	...	...	...	64,185	14	10
Caldwell House	...	...	...	...	9,110	10	0
					£324,461 3		

					Fever Hospitals and Sanatoria.	General Hospitals.	Mental Hospitals.
Average Daily Expenditure	...	...	...	...	£924 12 8	£1,079 5 11	£888 18
Average Daily Cost per Patient	...	...	...	...	0 6 9	0 5 10	0 4
Average Cost of Treatment per Patient	...	...	...	...	18 14 7	10 5 4	—
Average Cost of Bed per Year	...	...	...	...	123 3 9	106 9 2	79 1
Average Residence of Patients dismissed (days)	...	...	...	...	55.5	35.2	—

Patients Dismissed from Corporation Fever Institutions, classified as to Disease, Average Residence of Patients Dismissed, and Average Cost at the Daily Rate of 8s. 1d.

	Number Dismissed.	Total Days Treatment.	Average Residence	Average Cost per Patient.	Total Appro- Cost
Enteric Fever	62	3,233	52.14	£21 1 6	£1,300
Puerperal Fever	565	18,799	33.27	13 9 0	7,590
Scarlet Fever	4,905	175,808	35.84	14 9 8	71,080
Diphtheria	2,547	111,275	43.69	17 13 2	44,970
Erysipelas	671	10,202	15.20	6 2 10	4,120
Cerebro-spinal Fever	74	2,522	34.08	13 15 6	1,010
Enceph. Leth., &c.	2	151	75.50	30 10 4	60
Acute Primary Pneumonia & Influenzal Pneumonia	3,203	90,269	28.18	11 7 9	36,470
Tropical Diseases	142	3,439	24.22	9 15 9	1,400

OF TREATMENT OF PATIENTS IN FEVER, GENERAL, AND MENTAL

	Number Dismissed.	Total Days Treatment.	Average Residence.	Average Cost per Patient.	Total Approx. Cost.
Measles	1,422	38,456	27-04	10 18 7	£15,541
Whooping-cough ...	271	14,952	55-17	22 5 11	6,042
Chickenpox	181	4,779	26-40	10 13 5	1,931
Phthisis	1,708	264,923	155-11	62 13 10	107,078
Non-Pulmonary Tuber- culosis	696	236,383	339-63	137 5 4	95,538
Other Infectious Diseases	98	1,828	18-65	7 10 9	739
Veneral Diseases ...	175	5,606	32-03	12 18 11	2,266
All other Diseases ...	1,631	36,174	22-18	8 19 3	14,619

Number of Patients Treated and Average Daily Cost per Patient.

(1) In Fever Hospitals and Sanatoria.

	Remain- ing, 31/5/37	Admitted 1937-38.	Total under Treatment.	Dismissed, 1937-38.	Remain- ing 31/5/38.	Average Daily Number.	Average Daily Cost per Patient
Belvidere Hospital ...	547	6,049	6,596	6,091	505	546	7/2
Ruchill Hospital ...	805	6,992	7,797	6,975	822	810	7/-
Shieldhall Hospital ...	107	1,217	1,324	1,216	108	102	8/8
Knightwood Hospital	220	2,073	2,293	2,058	235	232	7/10
Robroyston Hospital	444	1,349	1,793	1,311	482	461	5/11
Bellefield Sanatorium	106	178	284	172	112	108	7/5
Mearns Kirk Hospital	496	537	1,033	530	503	490	5/5
Total ...	2,725	18,395	21,120	18,353	2,767	2,749	6/9*
Lightburn Jt. Hospital	3	33	36	29	7	4	—
Grand Total ...	2,728	18,428	21,156	18,382	2,774	2,753	—

(2) In General Hospitals.

Stobhill Hospital ...	1,746	13,666	15,412	13,697	1,715	1,751	6/-
Eastern Dist. Hospital	302	3,539	3,841	3,518	323	312	6/4
Western Dist. Hospital	255	5,547	5,802	5,547	255	254	6/6
Southern Gen. Hosp.	1,415	7,187	8,602	7,253	1,349	1,378	5/5
Total ...	3,718	29,939	33,657	30,015	3,642	3,695	5/10†

(3) In Mental Hospitals.

Woodilee Mental Hosp.	1,174	77	1,251	208	1,043	1,071	4/4
Gartloch Mental Hosp.	881	75	956	85	871	880	3/11
Hawkhead Mental Hosp.	923	282	1,205	174	1,031	989	4/6
Stoneyetts Hospital ...	—	209	209	23	186	141§	10/7
Lennox Castle Inst. ...	849	243	1,092	33	1,059	957	3/8
Caldwell House ...	13	82	95	16	79	69	7/3
Total ...	3,840	968	4,808	539	4,269	4,107	4/4‡

* Interest and Sinking Fund (excluded) averages 1/4d. per patient per day.

† Interest and Sinking Fund (excluded) averages 2d. per patient per day.

‡ Interest and Sinking Fund (excluded) averages 10d. per patient per day.

§ Average of 298 days.

TABLE XXII.—SPECIAL SANITARY OPERATIONS.

	YEAR.		
	1938.	1937.	1936.
(a) FOOD AND DRUGS, &c.—			
I. Dairies.			
Registered during year	225	231	253
Removed from Register	226	260	328
On Register at 31st December	1,769	1,770	1,799
Number of Inspections	21,360	21,763	22,969
Contraventions of Orders, Acts, or Bye-laws	30	39	24
Prosecutions for same	1	4	—
Repairs or Improvements effected	38	27	25
II. Dealers in Ice Cream.			
Registered during the year	39	32	59
Removed from Register	45	65	46
On Register at 31st December	528	534	567
Number of Inspections	7,136	7,210	7,582
Contraventions of Acts, Orders, or Bye-laws	10	16	4
Prosecutions for same	3	—	—
Repairs or Improvements effected	9	9	4
III. Byres for Milch Cows.			
Number of Dairy Byres as at 31st Dec. ...	72	35	39
Number of Cows licensed for	1,791	911	995
Average number kept	1,652	769	838
Number of Inspections	486	401	409
IV. Unwholesome Food.			
Number of Inspections	11,612	11,636	12,046
Number of Lots dealt with	91	70	50
Nature of Food destroyed at Inspector's instance with Owner's consent—			
Butter (lbs.)	5	—	—
Chickens "	31	—	—
Canned Food (various)	1,100	774½	500
Fruit (Dried and Soft)	22,514	23,390	39,816
Ham "	132½	22	14½
Pork (Fresh) "	—	—	224
Confectionery "	3	—	—
Vegetables "	36,916	1,758	25,336
Condensed Milk "	—	1,120	—
Fruit Juice (galls.)	—	—	56
Ice Cream "	—	25	—
Fruit Salad (in Jelly) (lbs.)	—	11,956	—
Mushrooms "	—	12	—
Pork and Brawn "	—	45	—
Chestnuts "	42	—	—
Lemon Tablets "	430	—	—
Fruit Sauce (pts.)	1½	—	—
Proceedings Instituted	1	—	—
Number of Convictions	1	—	—
Amount of Fines imposed	£2	—	—
V. Food and Drugs (Adulteration) Act.			
Informal Samples analysed	3,624	3,705	3,685
Statutory Samples analysed	1,333	1,339	1,331
Statutory Samples found non-genuine ...	74	70	86
Proceedings instituted	52	53	72
Number of Convictions	43	48	67
Amount of Fines imposed	£102 15s.	£120 3s. 6d.	£149 5s.
Number dismissed or found "Not proven"	3	1	1
Number deserted <i>simpliciter</i>	5	3	—
Warranty Defence Sustained	1	1	2
Number pending	—	—	2
Number withdrawn and Expenses paid ...	—	—	—
Amount of Expenses paid	—	—	—

TABLE XXII.—Continued.

	YEAR.		
	1938.	1937.	1936.
V. Food and Drugs (Adulteration) Act—Continued.			
Prosecution for False Warranty	1	—	1
Amount of Fine imposed	—	—	—
Prosecutions for Margarine offences	2	—	—
Fines and Expenses imposed	£4	—	—
Non-convictions	—	—	—
Vending Milk without name and address being on vessel	—	1	—
Number of Convictions	—	1	—
Amount of Fines	—	10s.	—
VI. Merchandise Marks Acts and Orders.			
Number of Prosecutions	18	16	16
Number of Convictions	17	16	16
Amount of Fines imposed	£11	£15 10s.	£13
Pending	1	—	—
(b) SMOKE ABATEMENT—Smoke Prevention.			
Glasgow Police (Further Powers) Act, 1892, Sec. 31, and Motor Vehicles (Construction and Use) Regulations, 1931—			
Number of Inspections of Boiler and other Furnaces	1,016	1,040	1,205
Number of Observations of Chimneys	27,657	25,997	28,051
Number of Intimations of Excess Smoke given	379	385	403
Number of Warning Notices to those contravening the Act	36	28	49
Number of Prosecutions in Police Courts	31	28	34
Number of Convictions	31	28	34
Amount of Fines imposed	£41	£37 10s.	£42 15s.
Number of Prosecutions withheld on receiving a promise from Offenders to improve the Furnace Plant	—	2	—
Number of Prosecutions withheld on account of accidents to Furnace Plant, or regular Fireman temporarily off duty	—	—	—
Number of New Steam Boilers installed to give increased power	31	28	26
Number of Mechanical Stokers fitted to Steam and Heating Boiler Furnaces	34	51	16
Number of Steam Boiler Furnaces fitted with Smoke-preventing Appliances	—	4	9
Number of Furnaces in which Anthracite, Coke, or other non-bituminous Fuel has been substituted for ordinary Coal	26	30	28
Number of Furnaces adapted for Smokeless Combustion of Oil Fuel	3	15	2
Number of Mechanical Dust Arrestors installed	6	—	—
Number of Steam Boilers replaced by Electric Motors (using Corporation power)	4	3	4
Number of new Chimneys erected or existing Chimneys heightened to give increased draught and carry gases higher	20	17	15
Number of Improvements to Furnaces not coming under any of the above headings	8	20	17
Number of new Central Heating Boilers installed	—	35	—

TABLE XXIII.

OPERATIONS OF SANITARY SECTION.

1. (a) Nuisances.	Central.	Northern.	Eastern.	South-Eastern.	South-Western.	City.	
						1938	1937
INSPECTIONS made—							
Nuisances	127,390	136,340	172,139	69,896	109,815	615,580	698,222
Bug Disinfestation	1,264	2,016	1,763	1,276	745	7,064	5,617
Water Storage Cisterns	376	1,985	892	799	—	4,052	2,279
Limewashings	6,841	7,896	11,205	6,458	9,166	41,566	40,519
Stair Cleaning	16,176	6,773	20,791	9,313	14,545	67,598	78,407
Drain Testing	17,400	6,103	7,413	2,016	6,122	39,054	36,424
Total	169,447	161,113	214,203	89,758	140,393	774,914	861,468
Nuisances removed or remedied ...	10,669	11,368	12,715	9,421	10,581	54,754	57,034
Consisting of—							
Apartments, Lobbies, or W.C.'s, with insufficient light or venti- lation, or otherwise defective in construction	1	1	1	5	1	9	24
Defective Chimneys causing nuis- ance	137	97	89	57	84	464	608
Disrepair or dampness in Dwell- ing-houses	1,239	1,457	2,382	1,274	1,458	7,810	8,103
Offensive smells from Drains, or other reasonable grounds— smoke test	82	10	136	15	3	246	280
Drains, Conductors, Soil-pipes, or Rhones choked or defective	3,937	4,616	4,321	3,485	4,180	20,539	20,974
Sanitary Fittings choked or defective	806	704	1,048	566	1,037	4,161	4,600
Dirty Houses and Bedding	20	119	386	127	17	669	90
Dirty Closets, Stairs, &c. (daily and bi-weekly cleaning)	443	1,433	996	647	1,023	4,542	4,751
Houses overcrowded	1	—	—	537	—	538	13
Common passages, stairs or stair- cases not in a cleanly state (limewashing or painting) ...	1,859	1,456	1,820	1,108	945	7,188	7,171
Animals or Poultry kept so as to be a nuisance	1	4	2	5	8	20	3
Accumulations of Garbage or Rubbish	623	168	172	368	204	1,535	1,900
Smells from Decaying Animal Matter or other cause	9	17	8	15	13	62	7
Stagnant Water	17	10	14	29	52	122	10
Premises infested with Rats or other vermin	108	162	355	98	75	798	99
Sink accommodation and Water Supply required... ..	—	—	—	—	—	—	—
Water-Closet accommodation re- quired	—	1	1	—	—	2	—
Water Storage Cisterns dirty, uncovered, or unventilated ...	154	455	234	216	1	1,060	1,111
Water Supply Pipes defective— tenants without water	98	63	39	54	173	427	44
Pit Shaft without adequate protection	—	2	—	—	—	2	—
Reports to Gas Manager	12	—	—	1	—	13	—
„ Master of Works	529	309	312	501	862	2,513	2,511

TABLE XXIII.—*Continued.*OPERATIONS OF SANITARY SECTION—*Continued.*

	Central.	Northern.	Eastern.	South-Eastern.	South-Western.	City.	
						1938	1937
Report to Superintendent of							
Cleansing	2	7	17	2	25	53	65
" Water Engineer ...	591	277	382	311	420	1,981	2,149
Prosecutions—Sheriff Court ...	—	—	—	—	—	—	3
" Police Court	16	1	—	4	2	23	36
Number Successful	16	1	—	4	2	23	36
Amount of Fines	£4 7 0	10/6	—	£5 5 0	10/6	£10 13 0	£13 8 0
Number of Rotation Cards for							
Cleansing of Common Stairs,							
Lobbies, and W.C.'s served on							
Tenants	1,854	6,078	2,183	1,790	2,953	14,858	15,112
1. (b) Drain Testing.							
Number of Applications for							
satisfaction of Dean of Guild							
Court	761	493	116	504	1,317	3,191	2,420
Number of first Applications to							
old Tenements or Systems ...	89	16	153	15	18	291	349
Number of these found more							
or less defective	74	10	128	12	9	233	307
Subsequent applications to old							
Tenements or Systems	118	18	137	18	10	301	332
2. Common Lodging Houses.							
Number measured and registered	—	—	—	—	—	—	2
Total number now on register ...	11	5	9	2	6	33	35
With accommodation for	2,699	1,649	2,585½	804	1,151	8,888½	9,400½
Number of inspections by day ...	207	74	233	92	190	796	743
Number of inspections by night	—	—	—	—	8	8	14
Number of irregularities	21	4	9	20	15	69	121
Number of prosecutions	—	—	—	—	—	—	—
3. Boarding Houses for Emigrants and Seamen.							
Number measured and registered	—	—	—	—	—	—	—
Total number now on register ...	2	—	—	—	—	2	2
With accommodation for	194	—	—	—	—	194	190
Number of inspections by day ...	6	—	—	—	—	6	4
Number of inspections by night	—	—	—	—	—	—	—
Number of irregularities	—	—	—	—	—	—	—
Number of prosecutions	—	—	—	—	—	—	—
4. Houses-Let-in-Lodgings.							
Number measured and registered	5	1	—	—	1	7	89
Total number now on register ...	93	5	—	6	36	140	163
Number of inspections by day ...	496	252	—	18	347	1,113	1,131
Number of inspections by night	—	—	—	—	—	—	34
Number of irregularities	—	—	—	—	3	3	5
Number of prosecutions	—	—	—	—	—	—	—

TABLE XXIII.—*Continued.*OPERATIONS OF SANITARY SECTION—*Continued.*

	Central.	Northern.	Eastern.	South-Eastern.	South-Western.	City.	
						1938	1937
5. Farmed-out Houses.							
Number measured and registered	2	—	—	—	—	2	—
Total number now on register ...	270	24	98	—	—	392	391
Number of inspections by day ...	3,658	190	958	—	—	4,806	5,945
Number of inspections by night	—	—	—	—	—	—	—
Number of irregularities ...	644	7	28	—	—	679	761
Number of prosecutions ...	2	—	—	—	—	2	—
Amount of fine ...	£2 0 0	—	—	—	—	£2 0 0	—
6. Ticketed Houses.							
Number ticketed for first time ...	—	—	—	—	—	—	—
Total number now on register ...	1,363	2,025	1,573	962	694	6,617	7,628
Number of visits by day ...	—	237	—	—	—	237	1,193
Number of inspections by night	—	—	—	—	—	—	—
Number of cases of Over-crowding found and warned ...	—	—	—	—	—	—	—
Number of prosecutions ...	—	—	—	—	—	—	—
7. Tents and Vans.							
Number of inspections ...	130	108	691	61	344	1,334	1,129
Number of irregularities ...	—	1	8	—	—	9	3
Number of prosecutions ...	—	—	—	—	—	—	—
8. Mechanical Bakehouses.							
Number measured and registered	4	2	2	7	—	15	13
Total number now on register ...	67	56	43	50	29	245	211
Number of inspections ...	379	153	171	478	84	1,265	1,482
Number dirty ...	32	7	16	12	8	75	105
Number Overcrowded ...	—	—	—	—	—	—	—
Number defective in light or ventilation ...	—	—	2	—	10	12	—
Number with sanitary conveniences required ...	1	—	—	1	—	2	—
Number with sanitary fittings choked or defective ...	1	—	5	1	4	11	17
Number of other nuisances ...	11	2	22	36	19	90	62
Number of prosecutions ...	—	—	—	—	—	—	1
9. Non-Mechanical Bakehouses							
Number measured and registered	4	3	9	2	—	18	23
Total number now on register ...	45	30	57	103	18	253	306
Number of inspections ...	290	199	251	340	24	1,104	1,104
Number dirty ...	15	10	12	16	2	55	90
Number overcrowded ...	—	—	—	—	—	—	—
Number defective in light or ventilation ...	—	—	—	—	—	—	—
Number with sanitary conveniences required ...	—	—	—	—	—	—	—
Number with sanitary fittings choked or defective ...	2	2	3	2	—	9	3
Number of other nuisances ...	7	3	6	5	3	24	31
Number of prosecutions ...	—	—	—	—	—	—	—

TABLE XXIII.—*Continued.*OPERATIONS OF SANITARY SECTION—*Continued.*

	Central.	Northern.	Eastern.	South-Eastern.	South-Western.	City.	
10. Non-Mechanical Factories						1938	1937
Number measured and registered	59	15	36	40	235	385	193
Total number now on register ...	1,152	432	368	495	235	2,682	3,085
Number of inspections ...	5,636	909	1,736	3,046	1,105	12,432	12,781
Number dirty ...	137	19	13	48	34	251	283
Number overcrowded ...	—	—	—	—	—	—	—
Number defective in light or ventilation ...	13	—	7	4	2	26	9
Number with sanitary conveniences required ...	1	—	—	—	1	2	3
Number with sanitary fittings choked or defective ...	33	1	10	8	3	55	101
Number of other nuisances ...	138	5	29	179	44	395	262
Number of prosecutions ...	—	—	—	—	—	—	—
11. Mechanical Factories.							
Number registered ...	1,664	662	779	475	556	4,136	—
Total number now on register ...	1,620	662	779	475	556	4,092	—
Number of inspections ...	1,132	434	383	188	2,026	4,163	—
Sanitary conveniences—							
Number dirty ...	24	13	16	9	194	256	—
Number defective in light or ventilation ...	32	1	56	7	378	474	—
Number insufficient, unsuitable or required ...	5	1	6	—	7	19	—
Number with sanitary fittings choked or defective ...	15	1	14	3	54	87	—
Number of other nuisances ...	30	4	110	28	391	563	—
Other parts of factory—							
Number of nuisances ...	5	5	2	8	5	25	—
Number of prosecutions ...	—	—	—	—	—	—	—
12. Shops.							
Number of inspections ...	1,957	1,981	603	866	3,677	9,084	2,705
Number dirty ...	18	7	1	12	1	39	19
Number defective in ventilation, temperature or lighting ...	124	236	97	48	48	553	194
Number with sanitary conveniences required ...	4	13	1	1	2	21	21
Number with washing facilities required ...	—	—	—	—	—	—	—
Number with sanitary fittings choked or defective ...	28	14	18	18	18	96	—
Number of other nuisances ...	41	14	20	32	6	113	53
13. Offices.							
Number of inspections ...	3	213	—	11	843	1,070	—
Number dirty ...	1	—	—	—	28	29	—
Number defective in ventilation, temperature or lighting ...	—	—	—	—	9	9	—
Number with sanitary conveniences required ...	—	—	—	—	1	1	—
Number with washing facilities required ...	—	—	—	—	—	—	—
Number with sanitary fittings choked or defective ...	—	—	—	1	—	1	—
Number of other nuisances ...	—	—	—	2	5	7	—

TABLE XXIII.—Continued.

OPERATIONS OF SANITARY SECTION—Continued.

	Central.	Northern.	Eastern.	South-Eastern.	South-Western.	City.	
						1938	1937
14. Homeworkers' Dwellings.							
Total number now on register ...	31	40	28	49	36	184	206
Number of inspections	46	60	106	231	12	455	444
Number found dirty	—	—	—	—	—	—	—
15. Piggeries.							
Total number now on register ...	13	33	8	3	2	59	33
Number of inspections	112	189	73	10	9	393	252
Number found dirty	—	36	2	—	—	38	37
Number of other nuisances	1	—	7	—	—	8	9
Number of prosecutions	—	—	—	—	—	—	—
16. Offensive Trades.							
Total number now on register ...	6	13	44	—	7	70	69
Number of inspections	19	67	1,351	—	33	1,470	1,040
Number of irregularities	—	1	39	—	—	40	3
Number of prosecutions	—	—	—	—	—	—	—
17. Rag Flock Act, 1911.							
Total number of visits	3	18	—	—	—	21	16
Samples submitted for analysis ...	—	5	—	—	—	5	3
Certified not to conform to standard	—	2	—	—	—	2	—
Number of prosecutions	—	—	—	—	—	—	—
Number of convictions	—	—	—	—	—	—	—
Amount of fines	—	—	—	—	—	—	—
18. Broker's Premises.							
Total number of visits	(Included under Factories)						317
19. Cemeteries.							
Total number of visits	—	18	40	44	13	115	102
20. Infectious Diseases, &c.							
Infectious Diseases, visits ...	24,744	27,227	20,291	19,197	15,021	106,480	91,353
Pre-admissions, Country Homes, visits	20	73	152	46	60	351	300
Vaccination visits	417	1,035	929	615	746	3,742	2,715
Institutional census	25	13	19	10	10	77	13
Air Raid Precautions visits ...	—	—	13	—	29	42	12,420
21. Housing Acts.							
Total number of visits	3,277	7,487	6,056	5,813	2,740	25,373	23,237

TABLE XXIII.—*Continued.*OPERATIONS OF SANITARY SECTION—*Continued.*

	Central.	Northern.	Eastern.	South-Eastern.	South-Western.	City.	
						1938	1937
22. Work of Female Inspectors.							
Under the Glasgow Corporation (Police) Order, 1904—							
(a) Verminous Children.							
Number of visits to schools ...	197	269	422	252	259	1,399	1,328
Number of children submitted for inspection ...	3,958	4,146	11,059	1,932	5,105	26,200	24,867
Number of children found infested ...	4	33	132	154	154	477	519
Number of children found infected ...	1,092	1,356	1,768	104	883	5,203	4,027
Number of children found with fleas ...	107	61	119	12	35	334	347
Number of children found dirty ...	114	154	541	79	50	938	825
Number of written notices ...	3	29	132	349	239	752	824
Number of children cleaned by Guardians ...	149	1,191	2,518	195	930	4,983	4,675
Number of children cleaned by officers ...	—	—	—	—	—	—	—
(b) Homes of Verminous Children.							
Number of houses inspected ...	1,434	1,258	1,767	253	1,217	5,929	5,448
Number of houses in which lodgers were found ...	118	8	5	5	30	166	212
Number of houses found dirty ...	3	8	16	23	1	51	67
Number of houses with dirty bedding ...	2	4	24	25	1	56	65
Number of written notices ...	—	—	22	—	2	24	11
Number of re-inspections ...	5	148	305	20	6	484	516
Number of houses cleaned ...	—	10	22	15	5	52	73
Number of bedding cleaned ...	—	4	22	17	2	45	61
(c) House-to-House Visitation.							
Number of houses visited ...	1,539	277	50	230	15	2,111	6,247
Number of houses in which lodgers were found ...	101	4	—	13	21	139	288
Number of houses found dirty ...	14	6	4	6	1	31	90
Number of houses with dirty bedding ...	12	2	—	6	1	21	39
Number of written notices ...	—	1	3	2	—	6	3
Number of houses—Re-visits ...	39	19	6	17	1	82	396
Number of houses found cleaned ...	17	4	6	6	1	34	87
Number of Bedding found cleaned ...	10	2	—	5	1	18	38

TABLE XXIII.—*Continued.*OPERATIONS OF SANITARY SECTION—*Continued.*

	Central.	Northern.	Eastern.	South-Eastern.	South-Western.	City.	
						1938	1937
(d) Re-housing Scheme Visitation.							
Number of houses visited ...	3,087	26,101	24,635	6,152	6,929	66,904	63,238
Number of houses in which lodgers were found ...	252	645	580	12	5	1,494	1,517
Number of houses found clean	2,985	17,215	12,858	5,800	6,298	45,156	43,849
Number of houses found fair ...	96	8,579	10,509	271	627	20,082	17,467
Number of houses found unsatisfactory ...	6	57	1,187	67	1	1,318	1,732
Number of houses found dirty...	—	250	81	14	3	348	190
Number of houses with dirty bedding ...	—	—	27	12	2	41	54
Number of written notices ...	—	—	23	3	5	31	16
Number of re-visits ...	63	895	1,502	486	52	2,998	3,264
Number of houses found cleaned ...	3	250	1,151	79	44	1,527	1,841
Number of bedding found cleaned ...	—	1	20	11	3	35	65
Number of empty houses visited	1	183	125	6	—	315	—
(e) Intermediate Housing Scheme Visitation.							
Number of houses visited ...	36	221	96	935	1	1,289	—
Number of houses in which lodgers were found ...	1	—	—	—	—	1	—
Number of houses found clean	36	123	53	883	—	1,095	—
Number of houses found fair ...	—	64	31	39	—	134	—
Number of houses found unsatisfactory ...	—	4	12	12	—	28	—
Number of houses with dirty bedding ...	—	30	—	1	1	32	—
Number of written notices ...	—	—	—	3	1	4	—
Number of re-visits ...	—	—	—	1	2	3	—
Number of houses found cleaned ...	—	42	4	73	2	121	—
Number of bedding found cleaned ...	—	30	4	13	1	48	—
Number of empty houses visited	—	—	1	1	1	3	—
(f) Other Work.							
Number of nuisances reported by Female Inspectors ...	—	1	235	269	—	505	693
Number of infectious disease cases reported by Female Inspectors ...	3	—	7	67	8	85	9

TABLE XXIV.—GLASGOW.—POPULATION; BIRTHS AND DEATHS; BIRTH-RATES AND DEATH-RATES PER 1,000; ALSO DEATHS UNDER 1 YEAR, AND DEATH-RATES PER 1,000 BIRTHS SINCE 1890.

Year.	Population.	Births.	Deaths.	Birth-rate per 1,000.	Death-rate per 1,000.	Deaths under 1 Year	
						Number	Rate per 1,000 Births.
1890 ...	561,447	19,279	13,374	34·3	23·8	2,880	149
1891 ...	567,143	19,857	14,324	35·0	25·3	2,946	148
1892 ...	669,059*	22,815	15,218	34·1	22·7	3,168	139
1893 ...	677,883	23,173	15,798	34·2	23·3	3,649	157
1894 ...	686,820	22,644	13,673	34·0	19·9	2,937	130
1895 ...	695,876	22,803	16,344	32·8	23·5	3,538	155
1896 ...	705,052	24,029	14,385	34·1	20·4	3,278	136
1897 ...	714,919	23,880	15,727	33·4	22·0	3,826	160
1898 ...	724,349	24,262	15,333	33·5	21·2	3,792	156
1899 ...	733,903	24,249	15,828	33·0	21·6	3,696	152
1900 ...	743,969	24,362	16,393	32·7	22·0	3,778	153
1901 ...	761,925	24,206	16,197	31·8	21·2	3,607	149
1902 ...	762,789	24,722	15,532	32·4	20·4	3,206	129
1903 ...	763,654	25,135	15,073	32·9	19·7	3,663	146
1904 ...	764,521	24,754	15,414	32·4	20·2	3,606	146
1905 ...	765,389	24,316	14,460	31·8	18·9	3,195	131
1906 ...	780,192*	24,560	14,889	31·5	19·1	3,223	131
1907 ...	781,080	24,006	15,659	30·7	20·0	3,116	130
1908 ...	781,969	23,915	15,265	30·6	19·5	3,284	137
1909 ...	782,860	23,140	15,242	29·6	19·5	3,073	133
1910 ...	783,785	22,222	13,395	28·4	17·1	2,694	121
1911 ...	784,680	21,755	13,899	27·7	17·7	3,016	139
1912 ...	785,600	22,044	13,797	28·1	17·6	2,740	124
1913† ...	1,021,789*	28,688	17,693	28·1	17·3	3,706	129
1914 ...	1,028,440	29,462	17,522	28·6	17·0	3,913	133
1915 ...	1,035,091	27,943	20,159	27·0	19·5	4,007	143
1916 ...	1,041,742	27,094	16,601	26·0	15·9	2,996	111
1917 ...	1,048,393	24,030	16,691	22·9	15·9	3,089	129
1918 ...	1,055,044	23,524	18,362	22·3	17·4	2,660	113
1919 ...	1,061,695	25,835	18,237	24·3	17·2	2,937	114
1920 ...	1,068,346	32,626	16,765	31·5	15·7	3,477	107
1921 ...	1,075,000	29,712	15,625	27·6	14·5	3,138	106
1922 ...	1,074,607	28,298	17,850	26·3	16·6	3,401	120
1923 ...	1,074,215	26,710	14,875	24·9	13·8	2,388	89
1924 ...	1,073,822	25,330	16,868	23·6	15·7	3,005	119
1925 ...	1,073,429	25,416	15,336	23·7	14·3	2,591	102
1926 ...	1,090,380*	24,541	15,731	22·7	14·6	2,548	104
1927 ...	1,089,988	23,578	15,439	21·6	14·2	2,527	107
1928 ...	1,089,595	23,649	15,701	21·7	14·4	2,525	107
1929 ...	1,089,202	22,799	17,760	20·9	16·3	2,438	107
1930 ...	1,088,810	23,322	15,455	21·4	14·2	2,355	101
1931 ...	1,088,461	22,926	15,505	21·1	14·2	2,397	105
1932 ...	1,095,263	22,732	16,071	20·8	14·7	2,542	112
1933 ...	1,103,357	21,361	14,747	19·4	13·4	2,061	96
1934 ...	1,115,590	21,822	15,234	19·6	13·7	2,140	98
1935 ...	1,119,414	22,102	15,537	19·7	13·9	2,169	98
1936 ...	1,119,600	22,273	16,406	19·9	14·7	2,429	109
1937 ...	1,119,863	22,176	16,379	19·8	14·6	2,313	104
1938 ...	1,127,825*	21,979	15,016	19·5	13·3	1,919	87

* Extended City.

† Births and Deaths from 1913 are corrected for transfers.

PART II.

FEVER AND TUBERCULOSIS HOSPITALS.

No change in accommodation or in the method of use was made during the year in the fever and tuberculosis hospitals except that one of the fever wards in Ruchill Hospital was devoted to the treatment of pulmonary tuberculosis in order to relieve the pressure on accommodation for this disease. The X-ray plant at Knightswood Fever Hospital came into operation, while a similar installation at Belvidere Fever Hospital will shortly be completed. When this has been done all the hospitals, with the exception of Shieldhall, will be fully equipped with X-ray apparatus.

Reports by the Superintendents on the work of the hospitals are given in a later section, where reference is made to the treatment of certain infectious diseases by the sulphonamide group of remedies. Increasing use is being made of Robroyston Hospital for chest surgery and the treatment of cases of special difficulty, including genito-urinary tuberculosis. The report on Mearnskirck Hospital shows that an increasing number of orthopædic cases in children are being admitted in co-operation with the Education Health Service.

The number of beds in the various fever hospitals is given in Appendix Table XX, which also shows the number of beds available for the treatment of tuberculosis in the fever and general hospitals as well as the number of beds occupied by cases from

Glasgow in other hospitals outside the City. The number of beds available in hospitals for infectious disease, tuberculosis and orthopaedics is as follows:—Belvidere, 666 beds; Ruchill, 814 beds; Shieldhall, 100 beds; Knightswood, 258 beds; Robroyston, 568 beds; Mearnskirk Hospital for Children, 500 beds; Bellefield Sanatorium, 108 beds; Baird Street Auxiliary Hospital, 24 beds. The total is 3,038 beds, which is equivalent to 2.7 beds per thousand of the population.

Altogether, 15,059 cases of infectious disease and 2,177 cases of tuberculosis were treated to a termination in fever hospitals and sanatoria, as shown in the following abstract. In addition, 306 cases of tuberculosis were treated in the Corporation general hospitals, while 208 cases were treated in sanatoria not belonging to the Local Authority.

Hospital.		Cases of Infectious Disease.	Cases of Tuberculosis.	Together.
Belvidere Fever Hospital	...	5,615	—	5,615
Ruchill Fever Hospital	...	5,681	797	6,478
Shieldhall Fever Hospital	...	1,055	—	1,055
Knightswood Fever Hospital	...	1,599	226	1,825
Robroyston Hospital	...	876	465	1,341
Mearnskirk Hospital	...	—	*529	529
Bellefield Sanatorium	...	—	160	160
Baird Street Hospital	...	162	—	162
Lightburn Hospital	...	37	—	37
Darnley Hospital...	...	1	—	1
Blawarthill Joint Hospital	...	33	—	33
		15,059	2,177	17,236

* Includes 50 Orthopaedic Cases.

The tables which follow give (1) the age and sex distribution of cases of infectious diseases dismissed well or who died in the fever hospitals; (2) a statement of altered diagnosis reported during the year 1938. Out of 7,241 male patients, 680 died, while of 7,818 female patients, 573 died, representing mortality rates of 9.4 per cent. and 7.3 per cent. respectively.

GLASGOW.—STATEMENT SHOWING AGE AND SEX DISTRIBUTION OF CASES

		Age.	Typhus Fever.	Enteric Fever.	Paratyphoid Fever.	Continued Fever.	Puerperal Fever.	Puerperal Pyrexia.	Scarlet Fever.	Diphtheria.	Erysipelas.	Cerebro-spinal Fever.	Ophthalmia Neonatorum.	Trachoma.	Encephalitis Lethargica.
Cases (including Deaths)—															
Males	...	— 1	—	—	—	—	—	—	10	13	20	9	33	—	—
"	...	— 2	—	—	—	—	—	—	102	56	4	—	—	—	—
"	...	— 3	—	—	—	—	—	—	151	92	3	3	—	—	—
"	...	— 4	—	1	—	—	—	—	176	108	2	1	—	—	—
"	...	— 5	—	—	—	—	—	—	190	110	—	3	—	—	—
"	...	— 10	—	—	1	1	—	—	712	440	6	6	—	—	—
"	...	— 15	—	2	1	1	—	—	217	186	9	3	—	—	—
"	...	— 25	—	4	1	2	—	—	116	102	28	6	—	—	—
"	...	— 35	—	3	1	—	—	—	48	29	44	5	—	—	—
"	...	— 45	—	1	2	—	—	—	16	9	54	4	—	—	—
"	...	45+	—	1	1	1	—	—	9	5	146	1	—	—	—
Total	...	—	12	7	5	—	—	—	1,747	1,150	316	41	33	—	—
Females	...	— 1	—	—	—	—	—	—	7	12	9	9	32	—	—
"	...	— 2	—	—	—	—	—	—	92	41	4	7	—	—	—
"	...	— 3	—	—	1	—	—	—	155	72	6	4	—	—	—
"	...	— 4	—	—	—	—	—	—	198	88	2	4	—	—	—
"	...	— 5	—	—	—	—	—	—	201	136	4	1	—	—	—
"	...	— 10	—	—	—	—	—	—	805	537	8	3	—	—	—
"	...	— 15	—	3	4	—	—	—	289	225	9	3	—	—	—
"	...	— 25	—	1	2	—	158	27	191	250	46	4	—	—	—
"	...	— 35	—	2	4	—	248	30	61	76	40	2	—	—	—
"	...	— 45	—	1	4	—	97	6	25	29	59	1	—	—	—
"	...	45+	—	2	7	—	1	1	10	13	125	1	—	—	—
Total	...	—	9	22	—	504	64	2,034	1,479	312	39	32	—	—	—
Deaths—															
Males	...	— 1	—	—	—	—	—	—	1	2	4	6	4	—	—
"	...	— 2	—	—	—	—	—	—	4	3	—	—	—	—	—
"	...	— 3	—	—	—	—	—	—	5	6	—	2	—	—	—
"	...	— 4	—	—	—	—	—	—	1	4	—	1	—	—	—
"	...	— 5	—	—	—	—	—	—	—	7	—	1	—	—	—
"	...	— 10	—	—	—	—	—	—	1	26	—	—	—	—	—
"	...	— 15	—	—	—	—	—	—	1	3	—	2	—	—	—
"	...	— 25	—	—	—	—	—	—	1	—	—	3	—	—	—
"	...	— 35	—	2	—	—	—	—	—	—	—	—	—	—	—
"	...	— 45	—	—	1	—	—	—	2	—	—	1	—	—	—
"	...	45+	—	—	—	—	—	—	1	1	5	1	—	—	—
Total	...	—	2	1	—	—	—	—	17	52	10	17	4	—	—
Females	...	— 1	—	—	—	—	—	—	1	3	2	8	4	—	—
"	...	— 2	—	—	—	—	—	—	2	8	1	5	—	—	—
"	...	— 3	—	—	—	—	—	—	4	10	—	1	—	—	—
"	...	— 4	—	—	—	—	—	—	2	6	—	—	—	—	—
"	...	— 5	—	—	—	—	—	—	2	11	—	—	—	—	—
"	...	— 10	—	—	—	—	—	—	2	32	—	2	—	—	—
"	...	— 15	—	—	1	—	—	—	1	7	—	1	—	—	—
"	...	— 25	—	—	—	—	9	1	1	3	—	3	—	—	—
"	...	— 35	—	1	—	—	18	2	—	1	—	1	—	—	—
"	...	— 45	—	—	—	—	12	1	—	—	—	1	—	—	—
"	...	45+	—	1	1	—	—	—	—	—	6	—	—	—	—
Total	...	—	2	2	—	39	4	15	81	10	22	4	—	—	—

DISMISSED FROM FEVER HOSPITALS, AND DEATHS DURING THE YEAR 1933.

Poonyellus.	Acute Primary Pneumonia.	Acute Influenzal Pneumonia.	Malaria.	Dysentery.	Infective Jaundice.	Measles.	German Measles.	Whooping-cough.	Chicken-pox.	Influenza.	Mumps.	Veneral Disease.	Pemphigus Neonatorum.	Abortions.	Anthrax.	No apparent Disease.	Others.	Total.
292	—	—	—	3	—	88	—	27	14	—	—	4	12	—	—	4	124	655
299	1	—	—	11	—	199	—	33	15	—	—	—	—	—	—	—	95	819
134	—	—	—	7	—	125	3	11	9	2	—	1	—	—	—	—	74	620
99	—	—	—	2	—	91	1	17	5	—	—	—	—	—	—	1	33	539
76	1	—	—	1	—	56	1	8	10	—	2	—	—	—	—	—	41	500
204	2	—	—	6	—	71	8	4	23	2	5	—	—	—	—	1	98	1,592
76	2	—	—	6	—	2	4	—	4	2	—	—	—	—	—	1	47	566
187	15	—	—	3	—	25	1	1	3	8	2	27	—	—	—	2	91	625
146	9	3	—	6	—	13	3	—	3	3	—	48	—	—	2	—	54	421
114	9	1	—	3	—	—	—	—	3	6	—	22	—	—	—	—	46	291
289	16	—	—	17	—	1	—	—	—	1	—	34	—	—	—	1	90	613
1,916	55	4	—	65	—	671	21	101	89	24	9	136	12	—	2	11	793	7,241
205	1	—	—	2	—	102	—	28	10	—	—	—	11	—	—	3	85	516
259	—	—	—	2	—	186	—	27	9	—	—	—	—	—	—	2	73	707
121	—	—	—	6	—	110	—	15	6	1	—	1	—	—	—	—	58	559
83	—	—	—	—	—	79	2	15	9	—	—	2	—	—	—	1	37	521
55	—	—	—	1	—	54	3	7	6	—	—	4	—	—	—	—	24	497
135	1	—	—	2	—	65	6	10	13	3	2	9	—	—	—	2	77	1,681
40	1	—	—	1	—	3	3	1	5	2	—	9	—	—	—	—	49	648
111	4	—	—	5	—	120	13	—	4	7	9	8	—	—	1	3	172	1,179
54	3	—	—	6	—	36	1	—	1	4	4	5	—	103	—	—	90	770
51	2	—	—	2	—	2	1	—	—	1	—	2	—	43	—	1	52	379
103	5	—	—	5	—	2	—	—	—	2	—	1	—	2	—	—	81	361
1,217	17	—	—	32	—	759	29	103	63	20	15	41	11	190	1	12	798	7,818
66	—	—	—	—	—	26	—	8	—	—	—	1	1	—	—	—	13	132
44	—	—	—	—	—	47	—	12	1	—	—	—	—	—	—	—	8	119
5	—	—	—	—	—	11	—	2	1	1	—	—	—	—	—	—	13	46
5	—	—	—	—	—	3	—	1	—	—	—	—	—	—	—	—	3	18
3	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	6	19
2	—	—	—	—	—	3	—	—	—	—	1	—	—	—	—	—	12	45
4	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	2	13
15	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19	38
25	2	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	2	32
31	3	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	8	49
132	8	—	—	3	—	—	—	—	—	—	—	1	—	—	—	—	17	169
332	13	—	—	4	—	93	—	23	2	1	1	3	1	—	—	—	103	680
51	—	—	—	—	—	21	—	15	—	—	—	—	3	—	—	—	8	116
43	—	—	—	—	—	37	—	7	—	—	—	—	—	—	—	—	5	108
10	—	—	—	—	—	19	—	1	—	—	—	—	—	—	—	—	8	53
8	—	—	—	—	—	9	—	2	—	—	—	—	—	—	—	—	3	30
1	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	3	19
1	—	—	—	—	—	3	—	1	1	—	—	—	—	—	—	—	5	48
12	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7	18
3	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19	48
17	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	2	30
40	2	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	5	38
187	3	—	—	1	—	91	—	26	1	—	—	—	3	1	—	—	80	573

GLASGOW.—TABLE SHOWING ALTERATIONS IN DIAGNOSIS
ORIGINALLY CERTIFIED AS

	Typhus Fever.	Enteric Fever.	Paratyphoid Fever.	Continued and Undefined Fever.	Puerperal Fever.	Puerperal Fever and Other Diseases.	Puerperal Pyrexia.	Scarlet Fever.	Scarlet Fever and Other Diseases.	Diphtheria.	Diphtheria and Other Diseases.	Erysipelas.	Erysipelas and
Enteric Fever	—	—	—	—	—	—	—	—	—	—	—	—	—
Enteric Fever and Other Diseases	—	—	—	—	—	—	—	—	—	—	—	—	—
Paratyphoid B	—	—	—	1	—	—	—	—	—	—	—	—	—
Paratyphoid B and Other Diseases	—	—	—	—	—	—	—	—	—	—	—	—	—
Puerperal Fever	—	—	—	—	—	—	1	—	—	—	—	—	—
Puerperal Pyrexia	—	—	—	—	3	—	—	—	—	—	—	—	—
Scarlet Fever	—	—	—	—	—	—	—	—	11	26	—	1	—
Scarlet Fever and Other Diseases	—	—	—	—	—	—	—	20	—	—	—	—	—
Diphtheria	—	1	—	—	—	—	—	8	—	—	2	—	—
Diphtheria and Other Diseases	—	—	—	—	—	—	—	2	—	30	—	—	—
Erysipelas	—	—	—	—	—	—	—	1	—	1	—	—	—
Erysipelas and Other Diseases	—	—	—	—	—	—	—	—	—	—	—	1	—
Cerebro-spinal Fever	—	1	—	1	—	—	—	—	—	—	—	—	—
Cerebro-spinal Fever and Other Diseases	—	—	—	—	—	—	—	—	—	—	—	—	—
Encephalitis Lethargica	—	—	—	—	—	—	—	—	—	—	—	—	—
Polioencephalitis	—	—	—	—	—	—	—	—	—	—	—	—	—
Poliomyelitis	—	—	—	—	—	—	—	—	—	—	—	—	—
Pneumonia	—	4	—	2	—	—	—	5	—	19	—	—	—
Pneumonia and Other Diseases	—	—	—	—	—	—	—	—	—	—	—	—	—
Influenzal Pneumonia	—	—	—	—	—	—	—	—	—	—	—	—	—
Malaria	—	—	—	—	—	—	—	—	—	—	—	—	—
Dysentery... ..	—	1	—	1	—	—	—	—	—	—	—	—	—
Dysentery and Other Diseases	—	—	—	—	—	—	—	—	—	—	—	—	—
Measles	—	—	—	—	—	—	—	37	—	21	—	—	—
Measles and Other Diseases	—	—	—	—	—	—	—	—	—	—	—	—	—
German Measles	—	—	—	—	—	—	—	30	1	1	—	—	—
German Measles and Other Diseases	—	—	—	—	—	—	—	—	—	—	—	—	—
Whooping-cough	—	—	—	—	—	—	—	—	—	2	—	—	—
Whooping-cough and Other Diseases	—	—	—	—	—	—	—	—	—	—	—	—	—
Chicken-pox	—	—	—	—	—	—	—	1	—	1	—	—	—
Chicken-pox and Other Diseases	—	—	—	—	—	—	—	—	—	—	—	—	—
Mumps	—	—	—	—	—	—	—	1	—	1	—	—	—
Anthrax	—	—	—	—	—	—	—	—	—	—	—	1	—
Influenza	—	—	—	10	—	—	—	—	—	—	—	2	—
Tuberculosis (all forms)	—	4	—	10	—	—	1	1	—	—	—	2	—
Diseases of Nervous System	—	1	—	2	—	—	—	1	—	4	—	7	—
Diseases of Circulatory System	—	1	—	1	—	—	—	1	—	7	—	7	—
Diseases of Respiratory System	—	4	1	6	—	—	—	1	—	65	—	1	—
Diseases of Digestive System	—	13	3	6	—	—	—	83	2	173	1	1	—
Acute and Chronic Nephritis	—	1	—	—	—	—	—	1	—	—	—	1	—
Diseases of Pregnancy and Parturition	—	—	—	—	22	—	1	—	—	—	—	—	—
All Other Diseases	—	3	2	8	1	—	—	23	1	10	—	69	—
No Apparent Disease	—	1	—	—	1	—	1	7	—	2	—	—	—
	—	35	6	48	27	—	4	223	15	363	3	93	—

OF CASES DISMISSED FROM FEVER HOSPITALS DURING 1938.

ORIGINALLY CERTIFIED AS

Cerebro-spinal Fever.	Cerebro-spinal Fever and Other Diseases.	Encephalitis Lethargica.	Polioccephalitis.	Poliomyelitis.	Pneumonia.	Pneumonia and Other Diseases.	Influenzal Pneumonia.	Influenzal Pneumonia and Other Diseases.	Malaria.	Dysentery.	Infective Jaundice.	Measles	Measles and Other Diseases.	German Measles.	Whooping-cough.	Whooping-cough and Other Diseases.	Chicken-pox.	Chicken-pox and Other Diseases.	Mumps.	Anthrax.
—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	1	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	6	—	—	—	—	—	—	1	—	—	—	—	1	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
38	—	—	—	1	—	5	—	—	—	—	—	4	—	—	2	—	—	—	—	—
—	—	—	—	—	8	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—
—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2	—	—	—	—	40	—	—	—	—	—	—	—	6	—	—	—	1	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	3	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	—	—	—	—	23	1	1	—	—	—	—	—	—	—	—	—	—	—	—	1
61	—	1	—	—	82	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—
31	—	—	—	1	8	—	—	—	—	—	—	3	—	—	1	—	1	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	1	24	—	2	—	—	—	—	—	—	—	—	—	—	—	1	—
11	—	—	—	1	456	—	12	—	1	1	—	6	—	—	4	—	—	—	—	—
32	—	—	—	—	67	—	1	—	—	20	—	1	—	—	—	—	—	—	—	—
—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9	—	—	—	3	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2	—	—	—	1	54	—	1	—	1	3	—	5	—	1	1	—	10	—	—	1
—	—	—	—	—	7	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
97	—	1	—	10	800	6	18	—	2	25	—	26	6	1	8	—	14	—	1	2

The Reception House at Moffat Street is now largely devoted to the treatment of cases of scabies, of which there were 107 last year, compared with 132 during 1937. The accommodation is also useful for the isolation of certain special cases which cannot be taken into hospital, such as maids or nurses in voluntary hospitals in whose throats diphtheria organisms have been found, and other contacts with no home address, such as those arriving on board ship.

CONTACTS, &C., ADMITTED TO MOFFAT STREET RECEPTION HOUSE.

				1938.			1937.
				Adults.	Children.	Total.	Total.
Influenza Contact	...	...	...	—	—	—	—
Scarlet Fever Contact	...	...	...	—	—	—	—
Diphtheria Contact	...	...	...	—	2	2	—
Whooping Cough Contact	...	...	...	—	2	2	4
Measles Contact	...	...	...	—	—	—	—
Chickenpox Contact	...	...	...	—	4	4	—
Impetigo	...	...	...	—	12	12	—
Verminous Persons	...	...	...	5	6	11	6
Scabies	...	...	...	8	99	107	132
For Observation before admission to							
Country Homes	...	...	...	—	—	—	—
Others	...	...	...	—	—	—	—
Total	...	...	...	13	*125	138	142

*Includes 6 infants (2 Diph. ; 3 Scabies ; 1 Impetigo).

INSECT PESTS IN INSTITUTIONS.

METHODS OF ERADICATION.

By Dr. Wm. C. Gunn.

It is well known that hospitals lend themselves to the propagation and spread of the following insects:—The greater cockroach (black beetle), the lesser cockroach (steam fly), crickets, silverfish, and ants. The extent and complicated nature of the lay-out of hospitals present a formidable task when the eradication of these insects has to be undertaken. The above-mentioned insects constitute a group of most successful colonizers wherever human beings dwell. Generally speaking they all thrive on waste food-stuffs and they concentrate in parts of buildings where foods are stored or cooked. These insects are found in greatest concentration in warm surroundings, such as are found in kitchens, pantries, adjacent food stores, and throughout the heating ducts.

Since October, 1936, a systematic effort has been made by this Department to overcome infestation in all the Corporation institutions. As a rule these insects are most active as foragers for food throughout the night when kitchens, etc., are usually deserted. Throughout the daytime they protect themselves by sheltering in crevices of woodwork and stonework and where they are safe from human interference. It may be mentioned, however, that ants are equally active throughout the day-time. Acting upon this knowledge, it is imperative that measures aimed at the extermination of these insects should be applied throughout the night-time when the insects are out of their retreats, and this principle has been applied in the campaign carried out in the various institutions. The results have been successful beyond expectation and with the exception of the ant the insects of this group have been definitely subdued.

Method.—All anti-vermin work has been supervised from the Central Department and one of the staff has been full-time on night duty carrying out the work in the institutions. An insecticide powder has been employed consisting of three parts Sodium Fluoride, one part fresh Pyrethrum Powder, and one part Boric Acid, mixed, and used dry. A member of the staff of the institution, usually supplied by the Clerk of Works, attaches himself to the expert from the Central Office for practical instruction in this insecticide work. After an inspection of the underworld of the institution, *i.e.*, the state of infestation throughout the basements and ducts, the powder is applied in the required quantities either by manual scattering or by means of a powder sprayer. It was found in each institution that considerable quantities of this powder had to be applied because of the degree of infestation; for example, in the largest institution of all, a general hospital, 17 cwts. of the powder had to be employed and the work of disinfestation occupied a period of three months.

It will be appreciated from these facts that successful disinfestation cannot be accomplished by the spasmodic and haphazard application of insecticide powders throughout the day-time. It can be confidently asserted that almost complete extermination of these insects can be accomplished by the methodical application of the insecticide by skilled workers throughout the night-time in these large institutions. Practically all of the general, fever and mental hospitals have been treated successfully during the past

two years but it has also been necessary for the trained member of the staff of the Clerk of Works or House Steward to follow up the work by making regular inspections of the places likely to become re-infested. At the time of writing only minor re-infestations in the institutions exist and these are being successfully dealt with by the anti-vermin expert together with the staff of the institutions.

Notes.—In the course of this work, the small ant, *monomorium pharaonis*, has been found in some of the institutions. The insecticide powder above-mentioned has been found to exercise a deterrent effect on the insect but so far complete eradication has not been accomplished. There is no doubt, however, that the persistent application of the insecticide keeps down the numbers of these insects and thereby reduces the nuisance created by them.

BELVIDERE FEVER HOSPITAL.

The number of patients admitted to hospital during 1938 was 5,573, which is about the average of recent years.

On 1st January there remained from the previous year 603 patients. During the year, 5,615 were treated to a conclusion, and of these 486 died. At the end of the year 561 patients were still in hospital. The general mortality rate was 8.8 per cent. The slight increase in this figure over that for 1937 is readily accounted for by the fact that measles prevailed to a considerable extent, and that scarlet fever admissions were about 500 less than in the previous year. Of the deaths, 143, or 29 per cent were moribund when admitted. The average duration of residence of patients who recovered was 36 days.

The first quarter of the year was the busiest, the daily average number of patients being 607. In the second quarter, the number was 550, in the third 368, and in the last quarter 517.

Measles admissions showed an increase in January, were greatest in March, but had practically ceased by July, when whooping-cough began to increase. Diphtheria prevailed extensively throughout the year with the exception of the month of August. In October and November, additional wards had to be opened, and at the close of the year no less than 13 wards were fully occupied, and the number of diphtheria cases in hospital in November reached the altogether exceptional figure of 240.

During the latter part of the year provision was made for housing an X-ray Department. Extensive alterations were carried out on an existing disused building and a rubber composition floor laid down. Additional windows were provided and the walls and ceiling were panelled in plywood. In addition to suitably housing the apparatus the department will include a waiting room, developing room, store room, and radiographer's room. It is hoped that this apparatus will be installed in June, 1939.

Scarlet Fever.—The number of cases of scarlet fever treated was 1,642 in contrast to 2,104 in 1937. The disease was of mild type, and certainly not more severe than that which prevailed in 1937. There were 8 deaths attributable to scarlet fever, giving a corrected mortality rate of 0.5 per cent. Two of the fatal cases were received in a moribund condition. In the statistical statement 20 deaths are included under scarlet fever with a mortality rate 1.2 per cent.

In the following statement the first group shows the 8 cases where death was directly due to scarlet fever. The second group shows deaths not attributable to scarlet fever.

GROUP 1.—

- 1, Scarlet Fever, Measles, Toxaemia ; 2, Scarlet Fever, Cellulitis, Septicaemia ; 3, Scarlet Fever, Acute Nephritis, Myocarditis ; 4, Scarlet Fever, Measles, Broncho-Pneumonia ; 5, Toxic Scarlet Fever ; 6, Scarlet Fever, Broncho-Pneumonia ; 7, Scarlet Fever, Endocarditis ; 8, Scarlet Fever, Broncho-Pneumonia.

GROUP 2.—

- 1, Measles, Scarlet Fever ; 2, Cellulitis, Toxaemia ; 3, Broncho-Pneumonia, Pericarditis ; 4, Appendicitis, Scarlet Fever ; 5, Measles, Broncho-Pneumonia ; 6, Diphtheria, Broncho-Pneumonia ; 7, Septicaemia (Scarlet Fever) ; 8, Diphtheria, Scarlet Fever ; 9, Broncho-Pneumonia, Laryngitis ; 10, Broncho-Pneumonia ; 11, Measles, Scarlet Fever ; 12, Scald of neck and arm, Surgical Scarlet Fever.

As hitherto, serum treatment was employed on all severe cases, and in the majority of those not actually rated as mild. The response was satisfactory. Sulphonamide treatment was pursued when considered suitable.

Sixteen cases were received suffering coincidently from other diseases; 11 from diphtheria; 3 from measles; 1 from chickenpox; and 1 from whooping-cough. In addition, 21 patients were received while incubating other conditions. Thirteen were in the incubation stage of measles; 6 were incubating chickenpox; 1 was incubating whooping-cough, and 1 rubella.

Surgical Conditions.—The Consulting Aurist directed the treatment of all ear conditions. There were 164 consultations. Thirty-eight mastoid operations were performed, and tonsils and adenoids were removed in 19 cases. Mr. James Russell, the Consultant in General Surgery, attended for 62 consultations and 8 operations. In addition, there were 63 operations under general, and 52 under local anæsthesia. Forty-six of the former were in puerperal fever cases.

Diphtheria.—Diphtheria was more prevalent than in the previous year, and the number of cases treated was 1,213, actually 368 more than in 1937; 1,147 were discharged well and there were 66 deaths. The mortality rate was 5.4 per cent., only slightly higher than in the previous year. In 1936 the rate was 3 per cent; in 1937, 5.1 per cent. During the last quarter of the year the disease became more severe in type, and the percentage of gravis type increased considerably. A few cases were met with (gravis type) where the local lesion was comparatively limited, although toxæmia was profound. Many cases were received with very extensive local lesions. In the past cases with lesions of like extent have usually given a history of several days' illness, but in the year under review many severe cases gave a history of only one or two days' illness. Generally speaking the dosage of serum was increased, several cases receiving doses in excess of 200,000 units. Response to serum was in some cases slow and not in keeping with past experience. In all severe cases serum was given both intramuscularly and intravenously, and care was taken that the whole dose did not consist of the highly concentrated refined antitoxin. As a rule, this was used intravenously and ordinary concentrated antitoxin intramuscularly. The opinion expressed in last year's summary that "the type of diphtheria in Glasgow is changing for the worse," is confirmed by the experience of 1938.

The fatal cases were classified thus:—

Faucial Diphtheria	...	...	...	...	...	...	35
Faucial and Nasal Diphtheria	...	...	...	...	...	...	13
Laryngeal Diphtheria	...	...	...	...	...	...	5
Diphtheria and Measles	...	...	...	...	...	...	1
Haemorrhagic Diphtheria	...	...	...	...	...	...	2
Diphtheria and Scarlet Fever	...	...	...	...	...	...	2
Bacteriological Diphtheria and Bronchitis	...	...	...	...	...	...	1
Diphtheria and Pneumonia	...	...	...	...	...	...	4
Faucial and Laryngeal Diphtheria	...	...	...	...	...	...	2
Faucial and Palatal Diphtheria	...	...	...	...	...	...	1

Age incidence of fatal cases was as follows:—

-1	-2	-3	-4	-5	-10	-15	-25	-35	-45	45+	Total
1	3	8	6	9	29	7	2	1	—	—	66

Twenty-one cases were received suffering coincidently from other diseases; 20 from scarlet fever and 1 from measles. Twenty-three were incubating other diseases; 9 were incubating scarlet fever; 6 incubating measles; 4 incubating chickenpox; 3 incubating whooping-cough, and 1 incubating mumps.

Schick Test—During the year 1938, 59 nurses were Schick tested on arrival in hospital. Thirty-nine of these recruits were Schick negative and 20 were positive. The positive reactors were immunised by means of Alum Precipitated Toxoid. Two doses were given—0.1 c.c. and three weeks later 0.5 c.c. Seven developed some inflammation at the site of injection which gave rise to some discomfort for 24 hours, and 2 of the 7 developed small abscesses, which required incision. On re-testing, one to three months after the last injection, all were found to be Schick negative.

None of the nurses immunised developed diphtheria, but as several instances of Schick negative reactors developing diphtheria have come to notice, it has been decided to dispense with the initial Schick test and immunise all nursing recruits as soon as possible after they enter the service.

Pneumonia.—The number of cases of pneumonia treated, 1,049, was 209 less than in the previous year; 847 were discharged well and 202 deaths occurred. The mortality rate was thus 19.2 per cent., but if 70 cases admitted in a moribund condition are omitted, then among 979 patients there were 132 deaths—a mortality rate of 13.5 per cent.

The fatal cases were classified as follows:—

Lobar Pneumonia	...	...	...	...	...	...	106
Broncho-Pneumonia	...	...	...	...	...	...	*82
Influenzal Pneumonia	...	...	...	...	...	...	3
Hypostatic Pneumonia	...	...	...	...	...	...	2
Others	...	...	...	...	...	...	9

*22 of the Bronchial cases were complicated with Enteritis.

Seven admissions were found to be incubating measles, 1 scarlet fever, and 1 chickenpox.

Twenty-two patients were found to be suffering from coincident diseases as follows:—Measles, 15; scarlet fever, 4; erysipelas, 1; diphtheria, 1; whooping-cough, 1—total, 22.

In 227 or 21 per cent. of the total treated, the diagnosis was revised as follows:—Bronchitis, 118; pulmonary tuberculosis, 24; scarlet fever, 24; influenza, 19; pleurisy, 13; measles, 7; enteritis, 3; tonsillitis, 8, whooping-cough, 4; others, 7—total, 227.

The age incidence was as follows:—

Age ...	-1	-2	-3	-4	-5	-10	-15	-25	-35	-45	45 +	Total.
Total Treated	186	179	70	41	35	105	56	97	63	63	154	1,049
Total Deaths	55	33	4	1	—	1	3	6	10	21	68	202

During the year typing was undertaken in many cases, but serum treatment was only employed to a limited extent. Chemotherapy in the form of M. & B. 693 was employed in a limited way from the beginning of August, and in the last quarter of the year extensively. This treatment has proved highly satisfactory.

The number of cases treated, and the type of disease prevalent in the first and last quarters of the year, were very similar. In the first quarter the mortality rate was 27 per cent. In the last quarter when M. & B. 693 was being extensively the rate was 18 per cent.

Puerperal Fever and Puerperal Pyrexia.—During the year 186 cases were treated in the puerperal wards. There were 12 deaths, giving a mortality rate of 6.3 per cent. Fourteen of these cases were abortions uncomplicated by sepsis, and these are not included in the statistical table under the puerperal figures but appear among the "Others." If they are deducted the mortality is approximately 7 per cent.

The following were the causes of death:—

Septic abortion and Phlegmasia Alba Dolens	...	...	...	...	1
Septic abortion and Peritonitis	...	...	...	...	2
Septic abortion and Septicaemia	...	...	...	...	1
Septic abortion and Uterine Haemorrhage	...	...	...	...	1
Puerperal Sepsis, Rheumatic Endocarditis and Pulmonary Infarct	...	...	...	...	1
Puerperal Sepsis and Tuberculous Meningitis	...	...	...	...	1
Puerperal Sepsis and Pelvic Cellulitis	...	...	...	...	1
Puerperal Sepsis and Pneumonia	...	...	...	...	1
Puerperal Sepsis, Bronchitis and Cardiac failure	...	...	...	...	1
Puerperal Sepsis and Metritis	...	...	...	...	2

The 186 cases dealt with were classified as follows:—

Puerperal Sepsis	90
Puerperal Pyrexia	45
Septic Abortion	37
Cases of Abortion uncomplicated by Sepsis	14

Cases notified as puerperal pyrexia which were found to be puerperal sepsis numbered 34. Of the cases notified as puerperal sepsis 17 were considered to be pyrexia due to other causes than puerperal infection.

The following conditions were responsible for the large group of 45 cases of puerperal pyrexia. Pyelitis, 18; mastitis, 13; bacilluria, 3; pyelitis and mastitis, 2; pyelitis and secondary anæmia, 1; lobar pneumonia, 1; pulmonary abscess, 1; severe anæmia, 1; sulphæmoglobinæmia, 1; mastitis and bacilluria, 1; puerperal insanity, 2; pneumonia pyelitis and mastitis, 1.

Urinary complications were present in no less than 45 per cent. of the cases. Bacilluria and pyuria were present in 39 cases; pyuria without detectable bacilluria in 25 cases, and bacilluria without pyuria in 20 cases. Despite the fact that many were obviously chronic lesions, the great majority were successfully treated.

Acute nephritis developed in 1 case of puerperal sepsis. Phlegmasia Alba Dolens occurred in 16 cases. In 28 cases dilatation and curettage were necessary, the majority being cases of incomplete abortion. Suppurative Mastitis required incision on 14 occasions, and minor septic foci requiring surgical attention were numerous. Four cases of salpingitis occurred, one of which required laparotomy and drainage. Blood transfusion was performed on four occasions.

Use was made of drugs of the sulphonamide group in all varieties of infection. They were found very effective in urinary conditions. It was more difficult to be certain that they exerted the same beneficial effect on pelvic infections and it was evident that they by no means completely controlled the spread of infective processes either locally or systemically.

Measles.—493 cases of measles were treated. There were 78 deaths which is equivalent to a mortality rate of 15.8 per cent. Cases were received continuously from January until July with the peak period in March. Seventeen of the fatal cases were moribund

on admission. Many of the patients were received late in their illness, and were sent to hospital because of already established complications. In no less than 67 broncho-pneumonia was the cause of death.

Age incidence in fatal cases was as follows:—

—1	—2	—3	—4	—5	—6	—7
18	40	10	5	1	3	1

Rubella.—Twenty-eight patients were treated. Of these 21 were notified as scarlet fever and 2 as measles.

Whooping-cough.—Only 62 cases of whooping-cough were treated mostly in the last quarter of the year. There were 20 deaths giving a mortality rate of 17 per cent. Nineteen of the deaths were due to broncho-pneumonia or broncho-pneumonia associated with enteritis. One was due to convulsions. Sixteen of the fatal cases were under two years of age, and all were under four years.

Enteric Fever Group.—In all 32 patients were treated, 4 of whom died. The mortality rate was 12.5 per cent. Five were examples of *B. Typhosus* infection; 27 were *Paratyphosus B.*, and there were 2 deaths in each group.

Dysentery.—Twenty-five patients were dealt with. There was 1 death, a female adult who suffered from chronic nephritis, myocarditis and bacillary dysentery. The remaining 24 cases were all bacillary; 11 were in adults, 13 in children.

Cerebro-Spinal Fever.—Of a total of 121 cases notified as cerebro-spinal fever the diagnosis was confirmed in 33. The mortality rate was 50 per cent., but in the last few months of the year treatment with 693 was pursued with excellent results.

The diagnosis in the 88 incorrectly certified cases was:—

Tuberculous Meningitis	...	...	...	...	...	...	19
Pneumonia	...	...	...	...	...	...	20
Enteritis	...	...	...	...	...	...	13
Bronchitis	...	...	...	...	...	...	7
Pneumococcal Meningitis	...	...	...	...	...	...	6
Cerebral Haemorrhage	...	...	...	...	...	...	4
Influenza	...	...	...	...	...	...	4
Others	...	...	...	...	...	...	15

Poliomyelitis.—Eight cases, all children, were treated; all recovered.

Chickenpox.—144 cases were treated to a conclusion. There were 3 deaths attributable as follows:—1, miliary tuberculosis, meningitis and chickenpox; 2, enteritis, tetany, convulsions and chickenpox; and 3, meningococcal meningitis and chickenpox.

Venereal Disease.—131 patients received indoor treatment. There were 2 deaths, one due to cystitis and septic pericarditis, and the other to extensive cellulitis and septicæmia.

The age incidence of admissions was as follows:—

15-25	...	...	...	...	...	...	27
25-35	...	...	...	...	...	...	48
35-45	...	...	...	...	...	...	23
45 and over	...	...	...	...	...	...	33
							<hr/> 131 <hr/>

The average duration of residence in cases discharged was 31 days. Clinically the cases were classified:—Primary syphilis, 16; secondary syphilis, 10; latent syphilis, 1; all other stages, 7; acute gonorrhœa, 62; chronic gonorrhœa, 3; soft chancre, 17; no specific V.D., 12; not V.D., 3—total, 131.

Although there is no outdoor department connected with the hospital, no less than 431 children were brought for examination and advice. Of these, 106 were admitted suffering from the following complaints:—Scarlet fever, 27; diphtheria, 25; pneumonia, 24; chickenpox, 7; measles, 17; cerebro-spinal fever, 1; whooping-cough, 1; others, 4—total, 106.

THOMAS ARCHIBALD,
Physician Superintendent.

RUCHILL FEVER AND TUBERCULOSIS HOSPITAL.

The number of cases treated to a conclusion during the year 1938 was 5,669. This total is 399 fewer than in the previous year, the diminution in numbers being accounted for by a considerable drop in the numbers of scarlet fever and whooping-cough cases. The general mortality rate was 8.3 per cent., a figure which compares favourably with those of previous years.

In scarlet fever there was a drop of 510 in the total, this figure being 1,396. The disease was very mild and the mortality rate reached the low figure of .5 per cent. The investigation into the usefulness of the sulphonamide drugs in this disease, commenced in the previous year, was carried to a conclusion, and the findings definitely suggested that in ordinary scarlet fever no alteration in the course of the disease was produced. Moreover, their employment seemed to have no appreciable effect upon the occurrence of complications. In septic scarlet fever on the other hand several cases showed definite favourable reaction to the drug.

In the enterica group of diseases there were 10 cases of Typhosus infection, practically the same as last year, and 6 cases of Paratyphoid B. infection, a drop of 11 compared with last year. There were 2 fatal cases among the typhosus infections and 1 among the paratyphoid infections.

The indication towards the end of last year that diphtheria was becoming more severe in character has been borne out during this year. In addition the disease became much more prevalent and the number of patients dealt with reached the high total of 920 or 188 in excess of last year's figure. One of the most important results of the increase in the severity of the disease has been a prolongation of the average period in Hospital of dismissed cases and this, with the increase in the number of admissions, led to a very severe tax on accommodation and by the end of the year there were 11 wards in the Hospital receiving diphtheria. This number of wards in use for diphtheria is quite unprecedented.

The mortality figure for all cases was 4.6 per cent. as compared with 4.3 per cent. last year; there were periods when the number

of fatal cases was unduly high. For example, the mortality rate for March was 9.7 per cent., for June 7.2 per cent., for September 11.5 per cent. and for October 10.9 per cent. In each of these months the cases generally were of a severe type.

The extension of the period of residence in Hospital was in most instances due to myocardial affections which entailed a prolonged period of complete rest and curtailment of muscular exertion.

An investigation into the probable cause of this increased severity seemed to exclude such factors as age and sex incidence and also duration of illness prior to admission to Hospital but it was noted that more or less coincident with the development of the severe clinical type there had been an increase in the prevalence of the gravis type of organism in the City.

Erysipelas cases numbered 620, or 66 fewer than in 1937. The mortality rate of all cases was 3.2 per cent. but excluding 5 cases in which death was due to intercurrent disease this rate becomes 2.4 per cent. Both these figures are lower than before experienced. The sulphonamide group of drugs were continued as the treatment of this disease and the lowered fatality rate and also the rapidity of recovery in non-fatal cases again demonstrated their usefulness.

Cerebro-spinal fever patients numbered 41, about the same as last year and the mortality rate continued unsatisfactorily high, being 46.9 per cent. A small series of cases was treated with sulphanilamide combined with serum but the results were not very encouraging.

In the Autumn a small outbreak of anterior poliomyelitis was experienced and 24 cases were treated in this Hospital. The majority were from the City and immediate neighbourhood but a few were received from more or less remote parts of the West of Scotland. Most of the cases were fairly mild, limbs only being involved, but in 2 instances death resulted. In one of these, involvement of the respiratory and cardiac centres occurred; in the other, cardiac failure followed an acute cystitis consequent upon a paralysis of the bladder.

Acute primary pneumonia cases numbered 942, or 47 fewer than in 1937. The mortality rate was also lower, namely, 18.2 per cent. as compared with 21.6 per cent.

Influenza was not prevalent in the City and consequently influenzal pneumonia showed a marked drop in number, there being only 22 cases as compared with 70 last year. The mortality rate was somewhat higher at 27.7 per cent.

Dysentery cases showed an increase, 62 patients being dealt with compared with 31 last year. There were 4 fatalities but, in 3 of these, death was due to intercurrent disease and was not directly ascribable to the dysentery infection.

The year was one in which measles became epidemic and 586 cases were treated, an increase of 497 over the figures for 1937. The mortality rate was 12.3 per cent. which is not unduly high for hospitalized cases.

During the year an investigation was carried out with the object of comparing the efficiency of convalescent serum and commercial immune globulin in producing immunity to infection. The results, which are to be published in due course, showed that convalescent serum produced a high prevention rate and was entirely successful in causing modification of severity; on the other hand immune globulin, while producing a reasonably good prevention rate, was not so dependable particularly in producing a modified attack of the disease.

The whooping-cough epidemic, which had been present in the previous year, gradually subsided and only 79 cases were treated. The previous year's figure was 547 cases. The mortality rate was 13.9 per cent.

The Visiting Aural Surgeon saw 186 new and 66 old patients during the year. He performed 54 operations which included radical mastoidectomy, superficial mastoidectomy, removal of tonsils and adenoids, antral puncture and incision of retropharyngeal abscess. In addition he attended 19 members of the staff and operated on 4 of them.

Dr. Baxter, the Medical Officer in charge of the Tuberculosis Section of the Hospital, has submitted the following report upon the work carried out there:—

There was again an increase in the number of patients treated in the Sanatorium Wards during 1938, the total reaching the relatively large figure of 797 cases.

In the Summer months 16 extra beds were again made available. In spite of this, in the latter part of the year, it was found necessary to take over 24 beds in one of the Fever Hospital Wards, in order to cope with the abnormal waiting list of female patients.

The mortality rate, nevertheless, was lower than in 1937, the figure being 26 per cent. as against 27.5 per cent. for all cases, while corrected for pulmonary tuberculosis the figure dropped from 26.3 per cent. to 24.7 per cent. in 1938.

It will be observed from the table of returns (Ministry of Health Classification) that the main feature is the large number in advanced stages of the disease, *i.e.*, Groups 2 and 3 which also yield an increase in the number of deaths.

The routine treatment has been maintained, and special chrysotherapy and collapse therapy undertaken when indicated.

The services of the Dental Surgeon were again much appreciated, and during the year treatment was given to 225 patients. The total number of extractions was 565, 14 patients had extractions under general anæsthesia, while 189 patients had extractions under local anæsthesia. In addition to palliative treatment, conservative treatment was commenced in June and in the following six months, 15 patients had 25 fillings, 9 patients had scalings, while denture repairs were undertaken and 1 partial upper denture was made.

The work in the Operating Theatre was carried out along the usual lines, there being 1 major operation under general anæsthesia, and 12 under local anæsthesia. The figures for other operative work are as follows:—

Artificial Pneumothorax refills	...	...	...	...	...	667
Paracentesis thoracis	...	...	...	...	...	622
Gas replacements	...	...	...	...	...	191

thus making a total of 1,493 operative procedures for the year 1938.

These figures indicate one rather striking feature for 1938, namely, a relative increase in the incidence of pleural effusion cases admitted for treatment.

The work of the Laboratory and X-ray Departments has been of a routine nature, and the installation of the Tomograph in the latter department will be a welcome addition.

The patients have, during the year, taken part in numerous recreations, whist drives, concerts and bowling-green competitions, but the outstanding feature of the year was the installation of wireless throughout the Sanatorium, both loud speakers and bedside headphones now being available for the patients.

In retrospect there is no doubt that the patients appear now to settle down to Sanatorium routine more easily than 10 years ago, thus facilitating the work of the nursing and medical staffs.

W. M. ELLIOTT,
Physician Superintendent.

RUCHILL HOSPITAL.—STATEMENT OF CASES TREATED ACCORDING TO SEX.
DATA BASED ON DISMISSALS AND DEATHS FOR YEAR 1938.

[illegible]

RUCHILL HOSPITAL—TUBERCULOSIS.

CASES DISMISSED AND DEATHS DURING THE YEAR 1938 AND THE AVERAGE DAYS RESIDENCE.

Pulmonary Tuberculosis.	Males.		Females.		No. of Cases Well.	Cases Dismissed.	Average Residence (days).						Ages.			Result of Treatment.				
			-50	-100	-150	-200	-300	300+	Average Days.	-5	-15	-25	25+	Much Im- proved.	Im- proved.	Not Im- proved.
T.B.0., Group I	...	39	10	...	49	—	5	17	11	4	7	5	133	3	18	23	5	22	24	3
II	...	10	9	...	19	—	5	3	5	2	1	3	209	1	2	10	6	7	10	2
III	2	4	2	4	2	2	—	—	2	—	104	—	—	4	2	—	1	1
T.B.-, Group I	...	13	23	...	35	1	3	10	15	5	2	1	127	—	10	18	8	22	12	1
II	...	37	30	...	66	1	8	17	23	11	5	3	129	1	—	32	34	34	30	2
III	2	6	1	7	5	1	1	1	—	—	53	—	1	2	5	—	—	1
T.B.+ , Group I	4	...	18	—	—	2	4	3	6	3	211	—	1	10	7	12	5	1
II	...	144	145	...	269	20	37	73	82	52	30	15	140	—	1	128	160	80	158	31
III	...	110	138	...	84	164	106	54	29	26	22	11	95	—	5	95	148	8	40	36
Lung Tumour	6	—	...	3	3	1	3	2	—	—	—	71	—	—	—	6	—	2	1
Tuberculous Meningitis	...	1	2	...	—	3	3	—	—	—	—	—	12	1	1	—	1	—	—	—
Bronchiectasis	...	5	2	...	6	1	2	1	—	4	—	—	110	1	—	2	4	2	2	2
Post-Pneumonic Conditions	11	12	...	...	22	1	4	6	6	4	3	—	117	6	8	5	4	17	4	1
Abdominal Tuberculosis	...	1	1	...	2	—	—	2	—	—	—	—	118	—	1	1	—	1	1	—
Bronchitis	2	3	...	5	—	1	4	—	—	—	—	75	1	1	—	3	3	2	—
Silicosis	3	—	—	2	1	—	—	—	94	—	—	—	3	1	2	—
Hilar Disease	3	...	3	—	—	—	1	1	1	—	164	—	3	—	—	2	1	—
Other Conditions	...	2	3	...	2	3	4	—	1	—	—	—	29	2	—	—	3	1	—	1
Totals	402	395	...	589	208	186	197	181	113	79	41	124	16	52	330	399	212	294	83

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KNIGHTSWOOD FEVER HOSPITAL AND SANATORIUM.

The number of patients dismissed, including those who died during the year 1938 was 1825 as against 1971 for the previous year. All the wards were used for the treatment of fevers, except two pavilions capable of accommodating about 75 patients with advanced phthisis.

The number of fever patients dismissed from hospital was 1,457, while 142 died, making a total of 1,599 patients. The mortality rate was 9.7 per cent as against 10.1 per cent. for the previous year.

Pneumonia.—Patients treated totalled 569 and of these 229 were lobar pneumonia, the remainder being cases of broncho pneumonia and bronchitis, in children and adults. The death rate for the whole group was 13.8 per cent. which was much less than that for the previous year, 25.1 per cent. Table I shows the distribution of 132 typed cases of lobar pneumonia admitted, in relation to the frequency and fatality percentages of each type.

TABLE I.

	Type.	Cases.	Deaths.	Frequency Percentage.	Fatality Percentage.
Type I.	34	1	25.7	2.9
Type II.	57	15	43.1	26.3
Type III.	7	4	5.3	57.1
Group IV.	34	8	25.7	23.5
Total	132	28	—	21.2

The data shown above reveals as usual the greatest incidence in the Type II infections with high fatality rate. The organism was present in the blood of 29 patients of whom 16 died, giving a fatality rate of 58.6 per cent. when a pneumococcal septicæmia was discovered.

During the first nine months of the year 28 cases admitted on the third day of illness were treated intensively with anti-pneumococcal serum and during the same period 39 cases, similar in every respect as far as possible were taken as controls. The results of the above investigation are shown in the following tables:—

TABLE II.

Cases treated with Serum.						
Type.	...	...	...	Cases.	Deaths.	Fatality Percentage.
Type I.	...	...	...	12	—	—
Type II.	...	...	...	15	5	33·3
Type III.	...	...	...	—	—	—
Group IV.	...	...	...	1	—	—
Total	...	...	...	28	5	17·8

TABLE III.

Cases Untreated regarded as Controls.						
Type	...	...	...	Cases	Deaths	Fatality Percentage
Type I.	...	...	...	13	1	7·6
Type II.	...	...	...	13	6	46·1
Type III.	...	...	...	1	1	100·0
Group IV.	...	...	...	12	3	25·0
Total	...	...	...	39	11	28·2

It will be observed from these results that there was no appreciable reduction in mortality rate in the 15 Type II infections treated with serum and although the total number of cases is small there is no definite difference between the treated and untreated which is significant.

During the last three months of the year 41 cases of lobar pneumonia in adults were treated with sulphanilamide-pyridine, otherwise called M & B 693. The results obtained from the use of this drug are shown in Table IV and in Table V a comparison can be made with the final outcome of the illness in 63 patients to whom neither antipneumococcal serum nor sulphanilamide was administered.

TABLE IV.

Cases treated with M & B 693						
Type	...	...	...	Cases	Deaths	Fatality Percentage
Type I.	...	...	...	6	—	—
Type II.	...	...	...	17	1	5·8
Type III.	...	...	...	5	3	60·0
Group IV.	...	...	...	13	2	16·3
Total	...	...	...	41	6	14·6

TABLE V.

Cases treated without Serum or Sulphanilamide						
	Type			Cases	Deaths	Fatality Percentage
Type I.	16	1	6.2
Type II.	25	9	36.0
Type III.	2	1	50.0
Group IV.	20	6	30.0
Total				63	17	26.9

It should be noted that of the 17 Type II infections treated with M & B 693 the mortality rate was only 5.8 per cent. whereas in 25 similar infections untreated the death rate was 36 per cent. The benefit derived from treatment with this new remedy in the most common severe form of the illness, therefore, appears to be considerable. No improvement resulted from its use in the very severe form of the illness caused by the Type III pneumococcus and in 12 such cases treated in the first three months of the year 1939 there were 6 deaths.

The number of the different varieties of leucocytes in the blood was investigated in every case. It became apparent that where the total number of cells was much reduced a fatal result generally ensued. But even where a moderate leucocytosis existed, if embryonic forms of the polymorphonuclear elements were greatly in excess the prognosis was invariably bad. The treatment with sulphanilamide seemed to restore the character of the imperfectly formed phagocytes with beneficial result, especially in the Type II infections.

Diphtheria.—The number of cases dismissed including deaths was 218 as against 379 for the previous year. The reduction in the number of patients treated is remarkable in view of the fact that the illness was prevalent in every other district of the City during the months of October, November and December.

The mortality rate was a little greater, 5.04 per cent. as against 4.4 per cent. for the preceding twelve months. Eleven deaths occurred, all of which were in "Gravis" or "Intermediate" forms of the disease, except in one instance where death followed the operation of tracheotomy. The following statement shows the number of patients with positive cultures before and after admission, the number of deaths and the varied types found during the year under review.

Year.	Number of Admissions.	Positive Cultures on Admission.	Positive Ward Cultures.	"Gravis."	"Inter- mediate."	"Mitis" Deaths.
1938 ...	... 247	62	133	26	22	26 11

Percentage Death Rate of Admissions—4.02 per cent.

Percentage Death Rate of Positives—9.09 per cent.

It will be observed that the bacillus could only be obtained by culture in 133 cases, so that it would appear that a little less than half of the total number of patients did not suffer from the illness. It was found impossible to type thoroughly the varied forms of the bacillus during the early months of the year due to temporary depletion of the medical staff and the extra time required for research work in connection with pneumonia.

There are patients in whom an avirulent form of the "Gravis" organism is found in the fauces and the illness in these instances is not at all severe.

There were submitted to the Schick Test 18 nurses, 12 of whom gave negative and 6 positive reactions. All of the susceptibles were immunised. The Aurist removed the tonsils and adenoids of 9 patients in order that negative cultures could be obtained from the nose and throat prior to dismissal.

Scarlet Fever.—There were considerably fewer patients treated, 372 as against 565 for the previous year. The type of case was very mild in character, the mortality rate being only 0.5 per cent. as against 1.06 per cent. in the preceding year. The two deaths which occurred were due to the septic form of the disease. The concentrated antitoxin for scarlet fever was administered to only 98 acutely ill patients as the type of case admitted was usually not very severe and the majority of the patients recovered quite well without the use of serum.

There were submitted to the Dick Test 41 nurses, 28 of whom gave negative reactions and the 13 positive reactors were all immunised.

The Aurist visited all patients suffering from otitis media and it was found necessary to remove the tonsils and adenoids of 18 of these patients in order to hasten the drying up of the discharge. The conservative mastoid operation was performed on three occasions with a similar object.

Measles.—The number of cases treated was 259 and the fatality rate 8.8 per cent. was due chiefly to broncho-pneumonia. The illness was not severe in character, and the death-rate was practically the same as in the previous epidemic when it was 8.02 per cent.

There was prepared by Dr. Barclay, 3,500 c.c. of convalescent measles serum, with which 330 contacts in this City and in neighbouring towns were injected for the prevention and attenuation of the disease and the following note gives the results obtained from its use.

Total Contacts Injected.	Modified Attack.	Prevention.
330	66	264

It will be noted that prevention has resulted most frequently although unless in special circumstances where the child is delicate a modified attack is to be preferred.

Pulmonary Tuberculosis.—During the past year 135 phthisis patients were discharged from hospital and 91 died making a total of 226 patients. The hospital was mainly used for the treatment and isolation of the more advanced type of patients. The following table shows the medical classification on admission:—

Stage of Disease.				Number of Cases.	Number of Deaths in each Group.
Early ...	...	...	...	12	—
Intermediate	...	...	...	77	25
Advanced	...	...	...	137	66
Total				226	91

Details of each of these groups are shown in the following table:—

Stage of Disease.				Improved.	Not Improved.	Died.	Total.
Early ...	.....	...	...	10	2	—	12
Intermediate	...	...	...	40	12	25	77
Advanced	...	...	...	46	25	66	137
Total				96	39	91	226

Apart from careful nursing and attention to the general health, no special form of treatment was adopted as the majority were in a very advanced stage of the disease.

WILLIAM DOW,
Physician Superintendent.

KNIGHTSWOOD HOSPITAL.—STATEMENT OF CASES TREATED ACCORDING TO SEX. DATA BASED ON DISMISSALS AND DEATHS FOR YEAR 1938.

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Disease.	Admitted.		Dismissed.		Died.		Remaining in Hospital at 31st Dec., 1938.		Mortality, per cent.		Average Residence (days).				Ages (Dismissed and Died).		Alterations.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Male.	Female.	
Typhus Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Enteric Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Paratyphoid B	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Continued Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Puerperal Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Smallpox	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Scarlet Fever	175	167	186	184	1	1	23	18	0.6	0.6	39	3	44	51	111	25	52
Diphtheria and Mem. Croup	111	122	98	109	6	5	20	22	5.4	4.1	32	5	5	28	55	21	25
Erysipelas	3	5	2	5	—	—	1	—	—	—	19	18	—	—	—	—	5
Cholera	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Cerebro-spinal Fever	2	3	1	1	1	2	—	—	50.0	66.6	33	56	1	3	1	1	3
Ophthalmia Neonatorum	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Trachoma	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Acute Encephalitis Lethargica	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Acute Poliomyelitis	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Acute Poliomyelitis...	1	2	1	2	—	—	—	—	—	—	69	94	—	1	—	2	1
Acute Primary Pneumonia	374	175	329	148	59	16	32	26	15.7	9.1	36	34	11	11	147	46	195
Acute Influenzal Pneumonia	13	5	10	3	4	—	2	2	30.7	—	40	24	8	—	1	13	—
Malaria	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Dysentery	3	6	4	5	—	—	—	—	—	—	16	21	—	—	2	1	1
Relapsing Fever	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Pulmonary Tuberculosis	3	—	2	—	1	—	—	—	33.3	—	6	—	3	—	—	—	—
Other forms of Tuberculosis	2	—	—	—	2	—	—	—	100.0	—	—	11	—	—	1	1	—
Measles	73	177	65	171	11	12	—	—	15.1	6.8	33	12	7	55	13	8	76
German Measles	1	5	1	4	—	—	—	—	—	—	7	9	—	—	—	—	1
Whooping-cough	33	43	20	25	7	11	6	7	21.2	25.5	49	44	13	7	27	—	31
Chickenpox	1	2	2	2	—	—	1	—	—	—	18	10	—	—	1	1	—
Mumps	2	1	1	3	1	—	—	—	50.0	—	21	18	2	—	1	1	—
Child with Mother	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
No apparent Disease	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Others	28	22	27	22	1	—	3	—	3.6	—	24	20	6	—	8	12	6
Unclassified (Staff)	2	13	2	12	—	1	—	—	7.7	9	14	—	17	—	—	2	—
Influenza	2	—	2	—	—	—	—	—	—	—	26	—	—	—	—	—	—
Totals	833	750	759	698	94	48	87	78	11.2	6.4	38	33	10	9	320	242	291
Phthisis (Sanatorium)	226	—	134	—	92	—	63	—	40.7	—	128	—	70	—	—	226	—

SHIELDHALL FEVER HOSPITAL.

During the year 1,055 patients passed through the hospital, a decrease of 142 as compared with the previous twelve months. The general death-rate was 7.8 per cent., as compared with 5.7 per cent. for 1937, an increase consequent partly on more severe pneumonia infections and partly on the prevalence of measles in the early part of the year. The largest number of beds occupied was 121, on 30th March and 18th November, and the smallest 52, on 13th July, the average being 97.

The health of the nursing staff was very good, infectious disease being limited to 1 case of rubella and 4 of mumps. Preventive inoculation has stamped out diphtheritic infection among the staff.

Diphtheria.—265 patients were treated. The death-rate, 4.5 per cent., indicates that the disease was of moderate severity, and the proportion of the grave nasopharyngeal form (27 cases; 10.2 per cent.) is less than for several years back. Other clinical types were numerically as follows:—Tonsillar, 210 (79.1 per cent.); laryngeal, 15 (5.7 per cent.); nasal, 7 (2.7 per cent.); vaginal, 1 (0.4 per cent.); and bacteriological, 5 (1.9 per cent.). Paralysis was observed in 12 cases, viz.:—7 palatal, 3 ocular, 1 ciliary, and 1 multiple. Eight of the twelve fatal infections were nasopharyngeal, associated with toxæmia and cardiac failure. Three others were tonsillar, death resulting respectively from jaundice, pneumonia and coincident measles. The twelfth, a tracheotomy case, died from tuberculous meningitis after over three months in hospital. Two other patients required tracheotomy, and made good recovery. Four patients had tonsils removed to obviate persistent throat infection; and there were two mastoid operations.

Scarlatina.—333 patients were treated. The policy of home nursing for suitable cases of this infection has considerably lightened the work of the scarlet fever wards. The disease has become very mild in recent years, severe septic cases being rarely seen, and the death-rate remaining under 1 per cent. Complications vary little in frequency from year to year, viz.:—

			1938.		1937.		1936.
Otorrhoea	...	...	8.7 per cent.		10.0 per cent.		8.8 per cent.
Rhinorrhoea	...	...	8.1	„	7.5	„	8.8
Cervical Adenitis	...	...	23.4	„	22.9	„	22.8
Arthritis	...	...	5.1	„	4.5	„	6.0
Nephritis and Albuminuria	...	...	3.6	„	3.3	„	5.7

Endocarditis and pneumonia were each observed once only, and re-infection four times (1.2 per cent.). In the three fatal cases, death resulted from septicæmia, nephritis and tuberculous meningitis respectively.

Routine treatment with Proseptasine was applied on admission to all cases. While it has not fulfilled its early promise in scarlatina, it appears to hasten the fall of temperature, and to reduce the severity if not the incidence of complications.

Forty-seven patients were referred to the Aural Surgeon, who made in all 75 attendances. His operative work included 2 mastoidectomies, and 8 tonsillectomies in the treatment of aural discharge. In no less than 6 of these the discharge ceased within four days, a striking indication of the value of this operation.

Pneumonia.—322 patients were treated, there being 124 lobar infections and 198 examples of broncho-pneumonia, with death rates of 20.9 and 14.1 per cent. respectively. Enteritis remains the most common complication in young babies, and was responsible for several deaths. Other complications were empyema, 5 cases; pleurisy with effusion, 4 cases; pericarditis, 1 case; and middle ear disease, 16 cases. The empyemas, all of pneumococcal type, were treated by rib-resection, and all recovered save one that was bilateral.

Treatment with M & B 693 was adopted as soon as this drug became available. Given at first only to very ill patients, its use was gradually extended, and in all 52 received it. Early results varied considerably, some being remarkably good and others disappointing. The numbers dealt with are too small to base conclusions upon, and it will be easier to assess the value of the drug in a later report.

Measles.—88 patients were treated during the period January—May, with a mortality rate of 12.5 per cent. Pneumonia supervened in 38 (43.2 per cent), being the immediate cause of death in all but 1 fatal case. Other complications were few, viz.:—Enteritis (4 cases), conjunctivitis (3), otitis media (4), and laryngitis (4). One severe case of croup was observed, requiring tracheotomy, and ending fatally.

Other Diseases.—The remaining 47 cases included 6 infective parotitis, 3 rubella, 1 cerebro-spinal fever (fatal), 1 pulmonary tuberculosis, 1 acute miliary tuberculosis (fatal), 1 chickenpox, 1 Sonne dysentery, and 33 non-infectious conditions. A child of 4 years admitted as diphtheria required tracheotomy for laryngeal syphilis, and was transferred to another hospital. A number of patients in the non-infectious group were notified as pneumonia and found to have bronchitis only. In all, 55 diagnoses were revised during the year.

WILLIAM NAPIER,
Physician Superintendent.

SHIELDHALL HOSPITAL.—STATEMENT OF CASES TREATED ACCORDING TO SEX.

DATA BASED ON DISMISSALS AND DEATHS FOR THE YEAR 1938.

Disease.	Admitted.		Dismissed.		Died.		Remaining in Hospital, 31st Dec., 1938.				Mortality, per cent.				Average Residence (days).				Ages (Dismissals and Deaths).				Altered Diagnosis.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	Males.	Females.			
Enteric Fever	...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Paratyphoid Fever	...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
Scarlet Fever	...	133	182	143	187	1	—	2	17	19	0.7	1.1	37	36	162	39	53	82	9	56	107		
Diphtheria and Mem. Croup	...	138	150	124	129	3	9	18	22	2.2	6.0	47	45	5	16	50	68	9	30	79			
Cerebro-spinal Fever	...	—	1	—	—	1	—	—	—	—	100.0	—	—	—	24	—	—	—	1	—			
Pneumonia	...	164	153	132	130	27	27	13	7	16.5	17.6	26	26	7	10	86	21	52	99	21			
Influenzal Pneumonia	...	3	3	3	3	—	—	—	—	—	—	22	22	—	—	3	—	—	—	—	3		
Dysentery	...	—	—	1	—	—	—	—	—	—	—	18	—	—	—	—	—	—	—	—	—		
Pulmonary Tuberculosis	...	1	—	1	—	—	—	—	—	—	—	4	—	—	—	—	—	—	—	—	—		
Other forms Tuberculosis	...	—	1	—	—	—	1	—	—	—	100.0	—	—	30	—	—	—	—	—	—	1		
Measles	...	56	31	51	26	6	5	—	—	10.7	16.1	24	31	9	13	38	6	13	23	2	6		
German Measles	...	—	3	—	3	—	—	—	—	—	—	28	—	—	—	—	—	—	2	1	—		
Mumps	...	—	6	—	6	—	—	—	—	—	—	13	—	—	—	—	—	—	—	6	—		
Influenza	...	1	1	1	1	—	—	—	—	—	—	15	12	—	—	—	—	—	—	1	—		
Others	...	14	12	13	12	—	—	2	—	—	—	28	24	—	—	10	2	1	1	5	6		
No apparent Disease	...	1	—	1	1	—	—	—	—	—	—	9	16	—	—	—	1	—	—	1	—		
Unclassified (Staff)	...	—	4	—	4	—	—	—	—	—	—	28	—	—	—	—	—	—	—	—	4		
Chickenpox	...	1	—	1	—	—	—	—	—	—	—	1	—	—	—	1	—	—	—	—	—		
Totals	...	512	547	471	502	37	45	50	48	7.2	8.2	34	35	11	14	238	180	90	211	216	120		
	...																				47		

ROBROYSTON HOSPITAL.

There has been no appreciable change since 1937 in the allocation of beds between the various departments of the hospital. At no time, however, has the demand for accommodation been so sustained as in the past year, and accordingly beds normally reserved for non-tuberculous chest diseases have been utilised for the treatment of non-pulmonary tuberculosis. To a lesser extent the same remark applies to beds reserved for genito-urinary tuberculosis. The allocation is given below:—

Pulmonary Tuberculosis	...	...	...	...	...	184
Non-pulmonary Tuberculosis	...	...	...	...	...	224
Puerperal Sepsis	...	...	...	...	...	56
Pneumonia	...	...	...	...	...	60
Abortions (overflow from Glasgow Maternity Hospital)	...					10
Beds for non-tuberculous surgical chest disease in males	...					10
Beds for non-tuberculous surgical chest disease in females...						10
Total	...	...	...			<u>554</u>

PULMONARY TUBERCULOSIS.

During 1938 there were 218 patients dismissed who had been under treatment for pulmonary tuberculosis. While this represents a slight increase over the previous year's figures actually a considerably larger number of patients was admitted, the increase being almost wholly accounted for by the re-opening of a convalescent hut in the early summer. A most satisfactory feature of the year's work was the slightly higher proportion of patients admitted with early or intermediate lesions. The treatment of these allowed ample scope for the practice of all forms of collapse therapy. An attempt to induce artificial pneumothorax was made on 159 patients, but was unsuccessful in 19 instances. A collapse was obtained in 86 women and in 54 men, and in a very large majority was maintained for a period sufficiently long to justify the expectation of improvement. In a considerable number the degree of relaxation achieved by pneumothorax was enhanced by temporary diaphragmatic paralysis. Bilateral simultaneous pneumothorax continued to be employed when there was some reasonable hope that it would lengthen life and diminish symptoms. A further 6 cases were so treated and added to the 5 carried over from 1937. There were 6 deaths, in 2 due to supervening spontaneous pneumothorax.

Pneumoperitoneum was tried in 6 female patients with active bilateral disease and in whom other forms of collapse were impracticable. In 3 of these the gradually induced rise of both halves of the diaphragm caused apparent improvement; in the remaining 3 the treatment had no obvious effect, deleterious or otherwise, and the disease pursued a fatal course.

Thoracic surgery has played a much more prominent part in treatment during 1938 than in the previous year, the number of operations performed having risen from 24 in 1937 to 98 in 1938. The modern view of the place of collapse therapy in the treatment of pulmonary tuberculosis demands that, once the decision to secure pulmonary collapse has been reached, successive operations to attain that end are not only desirable but essential. On such principles, several patients submitted to serial surgical procedures, in the full knowledge of the possible risks and complications involved. A considerable number gained distinctly from the additional relaxation afforded by temporary interruption of the phrenic nerve, after the decision had been reached that pneumothorax alone was insufficient; and not a few were advised that a thoracoplastic operation was preferable to an ineffective pneumothorax. The following few sentences give some idea of the work done. Thoracoplastic operations numbered 27—14 patients being involved, with 2 deaths attributable to the operation. Thoracoscopy was performed on 18 occasions on 15 patients, adhesions being divided for 12 of them, 9 without appreciable complication. Interruption of the phrenic nerve, temporary or permanent, was done on 38 occasions; in a few a temporary paralysis of the diaphragm was the sole form of collapse employed. The remaining number of operations, 15 in all, were necessary for acute or chronic lung sepsis. Included are 2 lobectomies, one of which resulted in death from empyema.

NON-PULMONARY TUBERCULOSIS.

A slightly smaller number of patients was discharged in 1938 than in 1937. The total of 210 represents a decrease of 9 on the previous year's dismissals. The following table gives the site of the lesions and the number of operations relative to each section. An additional list summarises surgical procedures in other departments.

Site of Lesion.	No. of Cases.	Deaths.	Operations during 1938.
Tuberculosis of Spine	50	11	3
Tuberculosis of Hip	16	2	5
Tuberculosis of bones other than spine	12	1	3
Tuberculosis of joints other than Hip ...	23	1	8
Genito-urinary Tuberculosis	35	3	*85
Multiple and Miscellaneous Lesions ...	21	5	2
Abdominal Tuberculosis... ..	43	7	10
Tuberculous Adenitis	10	—	1
Total	<u>210</u>	<u>30</u>	<u>117</u>

* Includes 33 cystoscopic examinations.

Additional operations (on tuberculous and non-tuberculous patients).

(a) Thoracic (all forms)	98
(b) Abortions	120
(c) Puerperal Sepsis	133
(d) Dental, Throat, Nose and Ear	5
(e) On Non-tuberculous Patients and Staff (exclusive of thorax and genito-urinary systems)	16
Total	<u>489</u>

The following 36 patients were proved to have no tuberculous disease. There were 7 deaths.

Admitted to wards for surgical treatment of non-tuberculous chest conditions :—
Bronchiectasis, 8 ; lung abscess, 1 ; chronic empyema, 2 ; bronchial carcinoma, 1 ; carcinoma of oesophagus, 1 ; total, 13.

Admitted to genito-urinary department as tuberculous infections :—Chronic nephritis, 1 ; chronic non-tuberculous epididymitis, 1 ; testicular teratoma, 1 ; no disease found, 1 ; total, 4.

Admitted as non-pulmonary tuberculosis :—Spinal osteo-arthritis, 1 ; chronic osteomyelitis, 3 ; syphilitic periostitis, 1 ; septic arthritis of hip and elbow, 1 ; prepatellar bursitis, 1 ; fracture of tibia, 1 ; osteogenic sarcoma, 1 ; carcinoma of tongue, 1 ; facial carcinoma following lupus, 1 ; total, 11.

Admitted as pulmonary tuberculosis :—Bronchiectasis, 1 ; amoebic abscess, 1 ; post pneumonic fibrosis, 3 ; post pneumonic empyema, 1 ; congestive heart failure, 1 ; no disease found, 1 ; total, 8.

PUERPERAL SEPSIS AND PYREXIA.

Below is presented a synopsis of the patients who were dismissed or who died during 1938.

TABLE 1.—SYNOPSIS OF PATIENTS.

	Total.	Died.
1. Puerperal Sepsis following the birth of a viable child ...	244	10
2. Puerperal Sepsis following the birth of a non-viable child...	132	15
3. Patients not suffering from puerperal sepsis (excluding abortions)	23	8
4. Abortions (not septic)	8	—
Death-rate 1.—Sepsis following the birth of a viable child ...	...	4.1%
Death-rate 2.—Sepsis following the birth of a non-viable child ...	...	11.4%
Combined death rate (all forms puerperal sepsis) ... ..	...	6.6%

TABLE 2.—PREDOMINANT LESION FOLLOWING BIRTH OF A VIABLE CHILD.

	Total.	Died.
Perineal and vaginal sepsis	6	—
Uterine sepsis	136	1
Adnexal sepsis	11	—
Pelvic Cellulitis	17	—
Phlegmasia Alba Dolens	28	2
Peritonitis	11	3
Septicaemia	35	4
Total	<u>244</u>	<u>10</u>

TABLE 3.—PREDOMINANT LESION FOLLOWING BIRTH OF A NON-VIABLE CHILD.

	Total.	Died.
Perineal and Vaginal Sepsis	—	—
Uterine Sepsis	88	1
Adnexal Sepsis	4	—
Pelvic Cellulitis	5	—
Phlegmasia Alba Dolens	7	1
Peritonitis	12	6
Septicaemia	16	7
Total	<u>132</u>	<u>15</u>

Patients suffering from conditions other than Puerperal Sepsis.

—During the year 8 cases suffering from abortion were admitted in whom sepsis was not proved. Among the remaining 23 (Table I—Section 3) there were 8 deaths due to the following causes:—

Pulmonary tuberculosis, 3; abdominal tuberculosis, 1; miliary tuberculosis, 1; aplastic anæmia, 2, myeloblastic termination to myelogenous leukæmia, 1.

The diagnosis of the patients who did not suffer from puerperal sepsis and who recovered was as follows:—No disease found, 1; pulmonary tuberculosis, 1; tuberculous abdomen, 1; pyelitis, 1; abscess of thigh, 1; varix of leg with phlebitis, 1; acute appendicitis, 1; acute mastitis, 8.

Commentary.—The year that has passed calls for but the briefest summary. The very appreciable drop in the mortality is most gratifying, since 1938 is the first completed year during which sulphonamide has been used to the exclusion of related substances, and during which treatment by this drug has been applied in a standardised manner. As compared with 1937, the dosage exhibited has been much smaller, and although the desirability of reaching a therapeutic concentration in the patient's blood as quickly as possible remains obvious, it has been found possible to maintain improvement on doses very much smaller than those employed after the first few days of illness during 1937. Apart from the economic aspect of such a change in procedure, the reduced dosage may account for the appreciably smaller number of complications. As compared with the previous year, the incidence of pulmonary embolism has been negligible and there were no fatalities from agranulocytic angina, although in several patients a serious drop in the numbers of circulating leucocytes was recorded. The only other complication of note was peripheral neuritis, which occurred in two instances.

The mortality rates given in Table I—Synopsis of Patients—serves to add weight to what has already been said in previous reports regarding the comparison between the death-rate due to infection following the delivery of a viable child, and that which results from infected abortion. In the past year the rate for the first group (Table I—Section 1) was 4.1 per cent. and for abortions (Table I—Section 2) it was 11.4 per cent. The figures for 1938 are however somewhat misleading, since there is little doubt that fewer gravely ill women were admitted with infection following full-time delivery; whereas among those admitted with septic abortion the incidence of severe sepsis has remained substantially the same from year to year. Among patients suffering from abortion, there is often undue delay in receiving medical advice, but in a

normally conducted confinement this advice is constantly available. Further, there seems to be little doubt that the exhibition of sulphonamide early in the puerperium and considerably prior to admission, has considerably reduced the incidence of the more grave manifestations of puerperal sepsis.

ABORTIONS (GLASGOW MATERNITY HOSPITAL OVERFLOW).

The following table summarises the conditions encountered during the past year. One death occurred, the woman concerned suffering from diabetic coma and uræmia; coincidental menstruation had occasioned her admission as an abortion.

	Discharged, 193.					Died, 1.
Threatened Abortion	24
Inevitable Abortion	24
Incomplete Abortion	87
Complete Abortion	43
Missed Abortion	2
Transferred as Septic on admission	7
Hydatidiform Mole	2
Normal Pregnancy	1
Induction of Labour (central placenta prævia)	1
Metropathia Haemorrhagica	1
Menopausal Haemorrhage	1
Diabetes Mellitus and uraemia	1
Total	<u>194</u>

PNEUMONIA.

During 1938 there were discharged 274 patients who had been admitted following notification as suffering from pneumonia. In 188 the existence of either primary or secondary pneumonia was confirmed. The remaining 86 were classified as follows:—Bronchitis, 51; pulmonary tuberculosis, 10; pleurisy, 3 (with effusion, 2); spontaneous pneumothorax, 1; whooping-cough, 3; acute rhinitis, 2; mitral stenosis, 3; congestive cardiac failure, 1; subacute bacterial endocarditis, 1; gastro-enteritis, 2; acute appendicitis, 1; thyrotoxicosis, 1; lymphadenoma, 1; pyelitis, 1; acute rheumatism, 1; fibrositis, 1; no disease detected, 3.

Complications were few, but empyema occurred in 5 patients, of whom 3 required operative interference. Among those suffering

from pneumonia, there were 15 deaths as follows:—Lobar pneumonia (total 68) 5 deaths, broncho-pneumonia (total 120) 10 deaths.

JOHN WATSON,
Medical Superintendent.

MEARNSKIRK HOSPITAL.

During 1938 the work of the hospital was continued along established lines. On 1st January there were 495 patients resident in hospital. During the year 540 further cases were admitted and 529 were dismissed or died, leaving 506 patients still in residence at 31st December, 1938. These figures are shown with the corresponding figures for the preceding five years in the following comparative table:—

PATIENTS ADMITTED AND DISMISSED, 1933-1938.

Year.			Admitted.	Dismissed.	In Residence at 31st December.
1933	...	...	463	463	501
1934	...	...	474	502	473
1935	...	...	494	468	499
1936	...	...	506	524	481
1937	...	...	523	509	495
1938	...	...	540	529	506

The conditions treated were of similar types and fell into the same three groups as in previous years. A further rise in the proportion of pulmonary cases is shown in the figures for 1938. These are compared with the figures for the preceding five years in the following table where the number of cases in each of the three main groups is expressed as a percentage of the total number of cases dismissed in the corresponding year:—

		1933.	1934.	1935.	1936.	1937.	1938.
(1) Non-Pulmonary Tuberculosis	...	67·8	63·0	55·1	54·8	55·6	50·8
(2) Pulmonary Conditions	...	20·5	22·7	32·5	34·7	33·4	39·7
(3) Orthopaedic Conditions	...	11·7	14·3	12·4	10·5	11·0	9·5

The remainder of the report deals with the 529 patients who were dismissed or died in hospital during the year. The total figure includes 55 deaths (10·4 per cent.) and 27 irregular dismissals. Three patients were transferred to other institutions. Of the remaining 444 patients who completed the course of treatment prescribed, 328 were healed on dismissal, 74 were much improved, and 42 were improved. The average duration of residence for all cases was 338 days. A table is appended showing the age and

sex distribution, the location of the disease and the general and local conditions on admission and on dismissal.

The cases which now fall to be considered in more detail have been classified for the purposes of this report as follows:—

						No. of Cases	Total.
(1) NON-PULMONARY TUBERCULOSIS—							
A. Abdominal Tuberculosis	...	...	...	...	...	48	
B. Bone and Joint Tuberculosis	...	...	...	...	...	166	
C. Glandular Tuberculosis	...	...	...	...	...	47	
D. Other Forms	...	...	...	...	...	8	
Total						269	269
(2) PULMONARY CONDITIONS—							
A. Tuberculous—							
1. Pleurisy	...	...	...	...	...	33	
2. Hilum Adenitis	...	...	...	...	...	36	
3. Intra-Pulmonary Disease	...	...	...	...	...	124	
Total						193	
B. Non-Tuberculous—							
1. Post-Pneumonic Conditions	...	...	...	...	...	13	
2. Other Conditions	...	...	...	...	...	4	
Total						17	210
(3) ORTHOPAEDIC CONDITIONS—							
A. Congenital	...	...	...	...	...	20	
B. Rickets	...	...	...	...	...	6	
C. Infantile Paralysis	...	...	...	...	...	14	
D. Other Conditions	...	...	...	...	...	10	
Total						50	50
						Total	529

Of the 269 cases classed as having non-pulmonary tuberculosis 166 had lesions of bones and joints, while 103 had lesions affecting the soft tissues. If the bone and joint cases are regarded as orthopaedic conditions and are added to the non-tuberculous orthopaedic cases the figures show that of the total dismissals 216 (41 per cent.) were orthopaedic cases, while 313 (59 per cent.) were other conditions, mainly tuberculous lesions of the lungs, abdomen, glands and other soft tissues.

(1)—NON-PULMONARY TUBERCULOSIS.

A.—ABDOMINAL TUBERCULOSIS.

In 1938 there was a further decline in the number of cases of abdominal tuberculosis, the 48 cases dismissed during the year

representing only 9 per cent. of the total dismissals. As in former years the disease was frequently of a mild nature and many cases admitted with a tentative diagnosis of abdominal tuberculosis failed during residence to present signs sufficient to warrant a diagnosis of this condition.

Among the 48 cases under consideration 23 showed no evidence of an active tuberculous lesion in the abdomen. Of these, 10 had other well defined conditions which were diagnosed as follows:— Non-tuberculous enteritis, 2; Hirschsprung's disease, 1; catarrhal jaundice, 1; hilum adenitis, 4; pulmonary tuberculosis, 1; and mental deficiency, 1. The remaining 13 cases, admitted in very poor general health, were suffering from debility due, in most cases, to malnutrition. They all made good progress under the hospital regime and were dismissed in excellent health.

In the 25 cases with abdominal tuberculosis the lesions found to be present were classified as follows:—

Tabes Mesenterica	...	...	...	...	...	...	7
Tuberculous Peritonitis	...	...	...	...	...	...	8
Tuberculous Peritonitis with Ascites	...	...	...	...	...	...	3
Tuberculous Peritonitis with Enteritis	...	...	...	...	...	...	4
Caseating Abdominal Tuberculosis	...	...	...	...	...	...	3
							<hr/> 25 <hr/>

The disease was very active in 4 cases, subacute in 14 and mild in 7. In 5 cases the patients were admitted with recurrence of activity following previous treatment. A family history of tuberculosis was given in 11 cases. The tuberculin reaction (Mantoux) was positive in 24 cases and negative in 1.

Treatment was usually conservative. Paracentesis abdominis was carried out as required in the ascitic cases. Operation was undertaken only in 1 case in the non-tuberculous group, presacral neurectomy being performed with a view to relieving colonic distension in a case of Hirschsprung's disease.

There were 4 deaths in the tuberculous group. All occurred in patients in whom the abdominal disease was complicated by widespread tuberculosis elsewhere. In 3 of them pulmonary involvement was present in addition to caseating abdominal tuberculosis and in the fourth case multiple bone lesions were present. There

was one irregular dismissal. The remaining 20 patients were dismissed in excellent condition and with the disease arrested, after an average residence of 166 days.

B.—BONE AND JOINT TUBERCULOSIS.

1.—*Tuberculosis of the Spine*.—During the year 37 cases, admitted with a diagnosis of tuberculous caries of the spine, were dismissed. In 33 of these the diagnosis was substantiated, while in 3 the conditions found to be present were Calvé's disease, 1; Schauermann's disease, 1; and sarcoma of spine, 1. In the remaining case no evidence of spinal disease was detected after full investigation.

Among the 33 cases of Pott's disease there were twice as many males (22) as females (11), the majority (23) being children under 10 years of age. A history of injury was elicited in 13 cases, while in 14 there was a family history of tuberculosis. The tuberculin test (Mantoux) gave a positive reaction in every case.

The region of the spine affected was as follows:—Cervical, 2; dorsal, 13; dorso-lumbar, 13; lumbar, 3; and lumbo-sacral, 2. The extent of the disease varied involving as many as 10 vertebral bodies in one case. In 2 cases there was a double localisation of the disease in the spine.

According to the records the disease began most frequently between the ages of 2 and 3 years and in 21 cases (63.6 per cent.) it had its onset in the first five years of life. At the time of admission the disease was of comparatively recent origin in 14 cases, while in 4 signs had been present for at least six months, and in 15 the disease was old-standing having been present for periods varying from 1 to 10 years. Among the old-standing cases 2 had received no previous treatment, 3 were transferred from other orthopædic institutions during the course of treatment, 5 were re-admitted with recurrence of activity after previous treatment and 5 were readmitted with later complications such as root pains from pressure on spinal nerve roots (2) and general debility resulting from gross deformity of the dorsal spine and interference with the cardiac and respiratory functions (3).

Deformity of the spine was present on admission in 30 cases, the gibbus being slight in 9 cases, moderate in degree in 10 and of a gross nature in 11. Among 23 cases dismissed regularly after

a full course of treatment, there was no apparent external deformity in 2, while the deformity was improved in 16 and not improved in 5.

Abscess formation was observed in 30 of the 33 cases and in 9 of these sinuses developed. In 15 the abscess was diagnosed from X-ray appearances only, there being no palpable swelling. In only one of these was sinus recorded but this was of a temporary nature and followed costo-transversectomy. In 3 the abscess was assumed from the presence of an open sinus on admission, while in 12 abscesses were palpated, 6 being present on admission, and 6 developing during residence. Sinuses developed in relation to 5 of these. The sites of the abscesses and the sinuses arising from them were as follows:—

Abscess				Sinus			
Retropharyngeal	...	...	2	Posterior Triangle	...	...	2
Mediastinal	...	...	2	Dorsal	...	...	1
Paravertebral	...	...	13	Dorsal	...	...	1
Psoas	...	...	9	Iliac region	...	...	3
Lumbar	...	...	4	Loin	...	...	2
<hr/>				<hr/>			
30				9			
<hr/>				<hr/>			

Nervous manifestations were observed in 24 cases. In 19, however, this amounted only to slight spinal irritability with a temporary increase of the spinal reflexes. In 2 there was pressure on posterior nerve roots and in 3 there was definite paraplegia with loss of sensation and loss of sphincter control. In one of the latter, complete recovery was secured after costo-transversectomy, one was removed irregularly and one, in whom previous laminectomy had left a persistent dorsal sinus, was dismissed with the sinus still discharging after numerous scrapings.

There were 6 deaths, all occurring in young children the oldest of whom was 5 years of age. Death was due to tuberculous meningitis in 3 cases and followed the development of amyloid disease in 2 cases with chronic sinuses. In 1 case, with multiple lesions including tuberculous pyonephrosis, death followed nephrectomy. In all 6 pulmonary disease was present in addition to the spinal lesion.

Three patients were dismissed irregularly and 1 was transferred to continue treatment in another institution. Of the remainder 22 were dismissed with the disease arrested or quiescent, and 1 with a persistent sinus in an old laminectomy scar was dismissed after prolonged treatment with the sinus still discharging.

Treatment was conducted along the usual lines, immobilisation with recumbency being secured on a spinal carriage in the early stage. During the ambulant stage of treatment plaster appliances were utilised, 45 plaster jackets, 7 plaster fillets and 2 Minerva jackets being made. More permanent supports were supplied on dismissal, 8 certalmid jackets, 2 certalmid fillets, 4 certalmid spicæ, 7 spinal braces, and 1 expanding collar being required.

Operative treatment was rarely necessary. Costo-transversectomy was carried out in one case where an upper mediastinal abscess was pressing on the spinal cord and trachea. In another case nephrectomy was carried out for pyonephrosis. Scraping of sinuses and other minor surgical procedures were undertaken where indicated.

The average duration of residence for all cases was 767 days.

2.—*Tuberculosis of Other Bones.*—Under this heading there fall to be considered 16 cases. Of these 8 had tuberculous dactylitis, while of the remaining 8, suspected of having tuberculosis of other bones, 3 were found to be suffering from chronic pyogenic osteomyelitis.

Among the cases of tuberculous dactylitis, there were 2 boys and 6 girls, 7 being children under 5 years of age. There had been contact with tuberculosis in the family in 5 cases and 3 gave a history of previous injury. The tuberculin test (Mantoux) resulted in a positive reaction in every case. The disease was of recent origin in 7 of the 8 cases. The long bones of the hands were affected in 5, the long bones of the feet in 1, and both hands and feet were involved in 2 cases. Abscesses developed in 5 cases and went on to sinus formation in 4. Aspirations were carried out in 2 cases and secondarily infected abscesses were incised in 3 cases. In one, sequestrectomy was required. Immobilisation was secured on duralumin hand or finger splints, or on Jones's foot splints. There was 1 death which occurred in an infant following the development of tuberculous meningitis. One patient was irregularly dismissed with the disease quiescent, and the others were dismissed in good general condition with the disease healed after an average residence of 373 days.

In the other group of 8 bone cases, the diagnosis was altered to chronic pyogenic osteomyelitis in 3 cases, the bones affected being the tibia, the radius and the humerus. Among the 5 tuberculous

cases the bones involved were the mastoid 1, the fibula 1, the radius 1, and the ribs 2. All of these cases gave a positive tuberculin reaction and in all the disease was of comparatively recent origin at the time of admission. Abscess formation occurred in 4 cases and sinuses developed in 3 of these. Two of the sinuses were of a temporary nature following operation. In the mastoid case a radical mastoid operation was performed and yielded an excellent result. In another case a sequestrum was removed from a localised focus in the head of the fibula. Supporting appliances were supplied in 3 cases. All patients were dismissed with the disease healed after an average residence of 291 days.

3.—*Tuberculosis of the Hip Joint.*—Among 57 cases with disease in the neighbourhood of the hip joint only 35 were suffering from tuberculous coxitis. The remaining 22 cases had conditions which were diagnosed as follows:—Transient arthritis, 11; Perthé's disease, 5; infective arthritis, 2; sarcoma of ilium, 2; osteochondritis of the ischio-pubic junction, 1; and tuberculosis of the sacro-iliac joint, 1. (It should be noted that sarcoma of the ilium occurred in one case only, the patient being transferred to another institution for X-ray therapy and appearing for a second time on the records after re-admission.)

Of the 35 cases with tuberculosis of the hip joint 20 were boys and 15 were girls. The right and left hips were affected with almost equal frequency (R. 17 L. 18). A history of antecedent injury was recorded in 16 cases and 11 gave a family history of tuberculosis. The tuberculin test (Mantoux) was positive in 31 and negative in 2 of the 33 cases in which it was carried out.

The disease had its onset at age three in about one-third of the cases and began in the first five years of life in 23, or 66 per cent. of the total. The duration of signs prior to admission varied from two months to ten years, being under six months in 11 cases, under a year in 5 cases and over a year in 19. Of the 19 old-standing cases 4 had received no previous treatment, 3 were transferred from other institutions during treatment and 12 were re-admitted—3 with recurrence of activity, 3 with recurrence of deformity, 3 with recurrence of activity and deformity and 3 for other reasons which were as follows:—the development of tuberculous meningitis, the presence of crutch paralysis and the fitting of a new appliance to a patient coming from a distance.

The site of origin of the disease was observed in 26 cases. It

began in the synovial membrane in 10 cases. In 5 of these pathological subluxation of the hip was an early feature, while in 4 prolonged clinical signs preceded the appearance of bone erosion. In 1 case the disease did not progress beyond synovial involvement. In the remaining 16 cases the earliest skiagrams available showed a bone focus which was in the femoral neck in 13 and in the acetabulum in 3. In 10 of the femoral cases the joint became involved but in 3 the disease remained extra-articular. In 2 of the latter the disease was located in the trochanteric region but in one there was a diffuse tuberculous osteomyelitis of the femoral neck. Thus in 26 cases the disease began as a synovitis in 10 cases and remained synovial in 1 only, while in 16 cases where the trouble began in bone, it remained extra-articular in 3 only. In 9 other cases in which the disease was advanced on admission early records were not available and the site of origin could not be determined.

Abscess formation occurred in 22 cases, the abscess being palpable in 21. In the other a calcified mass, not previously diagnosed as abscess, was observed below and medial to the femoral neck in the later stages of treatment. A similar mass was observed in another case in which a previous lateral abscess was recorded. In 15 cases sinuses developed. A history of abscess was given in 5 cases and of these 3 were admitted with open sinuses. Three cases were admitted with abscesses present and in 2 of these sinuses developed. During residence palpable abscesses occurred in 13 cases and went on to sinus formation in 10. The sites of the abscesses with the times of their appearance and the number and sites of the sinuses arising from them are shown more clearly in the following table:—

					Lat.	Ant.	Med.	Post.	Total.
ABSCESSSES—									
History of Abscess	...	...	...	...	3	2	—	—	5
Abscess present on Admission	...	...	...	...	1	1	—	1	3
Abscess developed in residence	...	...	...	...	10	2	1	—	13
Calcified Abscess (X-Ray only)	...	...	...	...	—	—	1	—	1
Total	...	...	...	...	14	5	2	1	22

SINUSES—

From Abscess present before admission—

(a) Open on admission	...	...	...	...	1	2	—	—	3
(b) Closed on admission	...	...	...	...	—	—	—	—	—
From Abscess present on admission	...	...	...	...	—	1	—	1	2
From Abscess occurring in residence	...	...	...	...	8	2	—	—	10
Total	...	...	...	...	9	5	—	1	15

Deformity present on admission in all but 5 cases was improved as a result of treatment in 21 of the 32 cases completing the prescribed course. In 3 cases there was no deformity on dismissal, and in 8 where bone destruction was considerable the original deformity was not improved. On dismissal the joint was moveable in 4 cases only, the others being fixed by fibrous or osseous ankylosis.

There were 2 deaths. One occurred in a child with an old-standing hip lesion who was readmitted with tuberculous meningitis. The other followed the development of amyloid disease in a child with multiple sinuses. (A third death, occurred in a non-tuberculous case with sarcoma of the ilium.) One patient was dismissed irregularly, the others were dismissed in good general condition with the disease healed or quiescent.

Treatment was carried out along orthodox lines, the adjustable hip carriage being used in the earlier stages of treatment. Plaster of Paris spicæ to the number of 55 were required during the ambulant stage. On dismissal more permanent supporting appliances were fitted to 28 patients. In addition 4 certalmid spicæ and 6 walking calipers were supplied to patients in the non-tuberculous group.

Major surgical procedures were required in 14 cases. Three of these were for the relief of complications in the urinary tract resulting from stone formation. The operations were as follows:—Hibbs' extra-articular arthrodesis, 3; sequestrectomy, 3; sub-trochanteric osteotomy, 2; tenotomy of adductors, 2; disarticulation of hip, 1; nephrectomy, 1; and pyelotomy, 2. The following minor procedures were also required:—Manipulation of hip, 12; scraping of sinuses, 7; cystoscopic examinations, 6; and lithotrity, 1.

The average duration of residence for all cases was 652 days.

4.—*Tuberculosis of the Knee Joint.*—Of 25 patients in this group 20 had tuberculosis of the knee, while 5 were suffering from a transient arthritis of traumatic origin. All of the latter cases were dismissed with no deformity and with full inability after a comparatively short period of residence.

Of the 20 tuberculous cases 12 were girls and 8 were boys. The right knee was affected more often than the left in the proportion

of 13 to 7. A history of injury was recorded in 14 cases and a family history of tuberculosis was given in 6. The tuberculin test (Mantoux) was positive in 19 cases but was negative in one case with a very active lesion which ultimately proved fatal.

Tuberculosis of the knee usually begins in the synovial membrane and is very resistant to treatment, tending in most cases to involve the articular cartilage. Young children with healed lesions in whom operative fusion is impracticable frequently return with flexion deformity and may require several manipulations before the age is reached at which arthrodesis becomes practicable. Many of the patients in the present series had old-standing lesions and were re-admitted because of increasing flexion deformity. There were 5 cases in which the disease was of recent origin, while in 2 it had been present for over six months. In the remaining 13 cases the disease had been present for periods varying from one to eight years. In one of the latter no previous treatment had been given, 1 had been treated as an out-patient for two years, while 11 had received prolonged courses of treatment and were re-admitted with recurrence of either deformity (7) or activity (2) or both (2).

The age at onset was under five years in 55 per cent. of the cases. On admission the disease was entirely synovial in 9 cases but spread to involve the articular surfaces in 6 of these. In 1 case admitted with disease in the external condyle of the tibia the whole joint became involved. The remaining 10 cases had old-standing tuberculous arthritis but the records showed that in 7 of these the disease originated in the synovial membrane, while in 2 it had its origin in the femoral epiphysis. In the remaining case the mode of onset was unknown but the history suggested an early synovitis. These facts are more clearly shown in the following table:—

Site of Origin.				Remained Localised.	Involved Whole Joint.	Total.
Synovial Membrane	...	...	...	3	13	16
Epiphysis of Femur	...	...	...	—	2	2
Epiphysis of Tibia	...	...	...	—	1	1
Unknown	...	...	...	—	1	1
				<hr/> 3	<hr/> 17	<hr/> 20

Abscess formation occurred in 8 cases and went on to sinus formation in 5 of these. In 5, the abscesses occurred before

admission and from 3 of these sinuses developed, one sinus being still open at the time of admission. Two patients were admitted with abscesses present and each of them formed a sinus although one was of a temporary nature following operation for the removal of a bone focus. In the remaining case abscess formation occurred during residence and no sinus developed.

Deformity was present on admission in 18 cases there being backward subluxation of the tibia in 3 of them. On dismissal there was no deformity present in 16 cases, while in 3 the original deformity was greatly improved. Some degree of mobility was present on admission in 11 cases, while in 9 the joint was immobile. On dismissal 12 of the joints were immobile, good osseous ankylosis being present in 3. One patient with very active disease of the knee died as a result of pulmonary complications. The others were dismissed in excellent general condition with the disease arrested or quiescent.

The knee cases were treated by immobilisation in Thomas's splints and plaster of Paris, 52 plaster splints being made. On dismissal 20 walking calipers were supplied, 19 to tuberculous cases, and 1 to a non-tuberculous case. Operative treatment was required in 5 cases as follows:—Arthrodesis of knee, 4, and gouging of local bone focus, 1. In addition 7 cases had one or more manipulations under anæsthesia. One patient developed acute intestinal obstruction resulting from inflammation of a Meckel's diverticulum. This called for bowel resection and lateral anastomosis. The patient made a good recovery. The average duration of residence for all cases was 397 days.

5.—*Tuberculosis of the Ankle and Tarsus.*—In this group there were 13 cases of whom 4 showed no evidence of tuberculosis. Two of these were suffering from Kohler's disease of the tarsal scaphoid and two had minor traumatic lesions. One of the latter had in addition, an accessory tarsal bone lying above the first cuneiform.

The remaining 9 cases had tuberculous lesions, 6 affecting the ankle joint and 3 the tarsal bones. In all 6 ankle cases the articular surfaces became involved. The articular cartilages were already eroded at the time of admission and the mode of onset was therefore unknown in 2 cases, but in the remaining 4 the disease began as follows:—In the astragalus in 2 cases, in the metaphysis of the fibula in 1 case, and in the synovial membrane in 1 case. The tarsal disease in the other 3 cases began in the cuneiform bones in

2 and in the astragalus in 1. Of the 9 tuberculous cases 4 were boys and 5 were girls. The right side was affected in 6 cases and the left in 3. A history of injury was given in 4 cases and 4 had a family history of tuberculosis. The tuberculin test (Mantoux) gave a positive reaction in all cases tested (8).

Only one patient was admitted with an early lesion the disease being well established or old-standing at the time of admission in 8 cases. All of the latter had received previous treatment and were admitted with continued activity (5), with recurrent activity (2), or because of the development of deformity (1).

Abscesses occurred and went on to sinus formation in 7 cases. The sinuses were already present on admission in 4 cases but developed during residence from abscesses present at the time of admission in 3 cases. Varying degrees of deformity associated with limited mobility were present on admission in 6 cases. After treatment deformity was absent except in one case where amputation had been carried out.

Operative treatment was required in 4 cases only, as follows:—Excision of ankle, 2; amputation of leg, 1; gouging of a local focus in the fibula, 1. In all other cases conservative methods were employed, immobilisation in a wooden posterior splint or a duralumin Jones's foot splint being followed by fixation in plaster of Paris. On dismissal a more permanent foot splint was supplied in 8 cases. In all, 21 ankle plasters were made, Bohler's irons being fitted in 4 cases. A certalmid foot splint with patten and crutches was supplied in 7 cases and an external leg iron with internal T-strap was fitted in one case. All patients received adequate general treatment, and in addition dental treatment was carried out where necessary.

There were no deaths. All patients were dismissed with the disease healed and in excellent general condition after an average residence of 364 days.

6.—*Tuberculosis of Other Joints.*—Tuberculosis affecting other joints was relatively infrequent. Only 8 cases require to be dealt with in this section, viz.:—Elbow joint, 3 cases; shoulder joint, 2 cases; sacro-iliac joint, 2 cases; wrist joint, 1 case. Of the elbow joint cases 2 had extensive disease of the humerus and ulna with abscess and sinus formation. These lesions ultimately healed with gross deformity and loss of mobility. The joints were fixed in the

optimum position in certalmid elbow splints. In one of the cases there was a bilateral lesion but on the other side the disease was localised in the olecranon from which a sequestrum was removed and healing, without joint involvement, and with free mobility was secured. In the third elbow case the disease affected only the olecranon and coronoid processes. Healing with free mobility was secured and the patient was dismissed in a collar and cuff appliance. The average duration of residence was 469 days.

Both shoulder joint cases were examples of caries sicca. The joints were manipulated into 70° abduction and became ankylosed in that position. The patients were dismissed healed with duralumin arm abduction splints, after an average residence of 478 days. In one of the cases admitted with a diagnosis of sacro-iliac joint disease, the diagnosis was altered to tuberculous caries of the sacral spine. The other case with disease in the right sacro-iliac joint, healed satisfactorily after prolonged treatment in a plaster bed and was dismissed in a certalmid spica with patten and crutches. The average duration of residence was 779 days. The wrist lesion was an extensive and active one involving all the carpal bones and the bases of the metacarpals. Volar and dorsal abscesses developed and a volar sinus was present on admission. The disease rapidly became quiescent under treatment and the patient was dismissed in good general condition with the disease apparently arrested and with the wrist in a duralumin cock-up splint, after 381 days' residence.

C.—TUBERCULOSIS OF GLANDS.

During 1938 there were dismissed 47 cases admitted to hospital with enlargement of lymphatic glands. Tuberculous lymphadenitis was diagnosed in 39 cases, while in the remaining 8 the diagnosis was as follows:—Non-tuberculous lymphadenitis, 5; lymphadenoma, 1; naso-pharyngeal fibro-sarcoma with metastases in cervical glands, 1. The last case was transferred elsewhere for deep X-ray therapy and re-appeared on the records as a second case on re-admission.

In the 39 tuberculous cases the glands affected were:—Cervical, 34; cervical and axillary, 1; inguinal, 3; inguinal and axillary, 1. The disease was old-standing in 9 cases and of recent development in 30. There was a family history of tuberculosis in 11 cases and the tuberculin reaction (Mantoux) was positive in 37. In the 2 cases with a negative reaction tubercle bacilli were grown from specimens of pus from the glands. Abscess formation occurred in

36 cases and went on to sinus formation in 30. The sinuses were already present on admission in 28 cases and developed from abscesses present at the time of admission in 2 cases. Six cases developed abscesses in residence but no sinuses resulted. Other tuberculous lesions were present in 17 cases as follows:—Hilum adenitis, 9; pulmonary tuberculosis, 4; dactylitis, 2; spinal caries, 1; multiple, 1.

Treatment consisted of a combination of conservative and operative measures. Abscesses were aspirated, or incised if secondarily infected, sinuses were scraped and gland masses excised as indicated. Carious teeth and other infective foci received surgical treatment as required. There were no deaths in the tuberculous group. The patient with the malignant growth in the naso-pharynx died after the development of huge metastases in the skull and liver. The patient with lymphadenoma was dismissed irregularly. All others were dismissed healed and in good general condition after an average residence of 254 days.

D.—OTHER FORMS OF NON-PULMONARY TUBERCULOSIS.

The cases dismissed during the year and included under the above heading were relatively few in number but varied in type. There were 5 cases with disease of the skin and soft tissues, 1 case of genito-urinary tuberculosis, 10 cases with multiple lesions and 2 with other conditions. Of the soft tissue lesions 2 were non-tuberculous and were diagnosed as fibro-lipoma of leg and acute ischio-rectal abscess. The others were examples of lupus (2 cases) and tuberculous lymphadenitis of the inguinal glands with abscess and sinus formation (1 case). The patients were all dismissed healed and in good general condition after an average residence of 164 days.

The child with genito-urinary disease suffered from bilateral renal tuberculosis associated with frequency of micturition, albuminuria and hæmaturia. Tubercle bacilli were isolated from the urine and the cystoscope revealed areas of ulceration around both ureteric orifices. In spite of the presence of pulmonary disease and numerous calcified mesenteric glands and although the child was the sole survivor of a large tuberculous family, she responded well to conservative treatment including tuberculin therapy, and was dismissed well with the urine clear after 773 days' residence.

All 10 patients classed as having multiple lesions had two or more areas of active tuberculosis present at the time of admission.

The lesions were of a gross nature in most cases and varied in number from 2 to 9 with an average of 4. There were 5 deaths in this small group, death resulting from tuberculous meningitis in 1 case, from amyloid disease in 1 case and from generalised tuberculosis in 3 cases. The remaining 5 patients were dismissed with the disease arrested after an average residence for the whole group of 803 days. In addition to the 10 cases considered here many of the patients included in other sections of the report had tuberculous lesions other than the one under which they were classified. The abstracted figures show that 70 (26 per cent.) of the 269 cases with surgical tuberculosis and 31 (16 per cent.) of the 193 cases with pulmonary tuberculosis had tuberculosis at more than one site.

Two cases admitted with other conditions, viz.:—Acute bronchopneumonia and fistula-in-ano made a good recovery after a short period of residence averaging 42 days.

(2) PULMONARY CONDITIONS.

In the pulmonary group there were 210 patients of whom 33 were adults and 177 were children. This number represents an increase of 40 over last year's figure and it is noteworthy that the class of case was of a more severe type. With regard to sex distribution, the adult series consisted of 4 males and 29 females, while among the children there were 88 boys and 89 girls.

A diagnosis of pulmonary tuberculosis was arrived at in 193 patients, that is in over 91 per cent. In the remaining cases, 17 in number, or 8 per cent., the pulmonary condition was thought to be due to causes other than the tubercle bacillus. The Mantoux test was carried out on all children, with one exception and proved to be positive in 165 or 98 per cent. There were 11 cases in which the test was negative and it is of interest that 6 of them died of acute pulmonary tuberculosis while in hospital. A family history of tuberculosis was obtained in 8 adult cases, 24 per cent., and in 62 children, or 34 per cent.

The response to treatment was for the most part satisfactory. Apart from the general routine measures myocrysin therapy was employed in 37 cases of acute or subacute disease and appeared to have a beneficial effect in 23 of them. The number of cases suitable for collapse therapy was only 11, but they appeared to benefit materially from it. The average duration of residence for all cases was 232 days.

The nature and extent of the lesions found were classified as follows:—

A. TUBERCULOUS GROUP—

1. Acute Broncho-Pneumonic Tuberculosis	12
2. Acute Miliary Tuberculosis of the Lungs	1
3. Bilateral Pulmonary Tuberculosis	74
4. Unilateral Pulmonary Tuberculosis	20
5. Hilum Adenitis	36
6. Hilum Adenitis with Perihilar Involvement	17
7. Tubercular Pleurisy	33
	<hr/>
	193
	<hr/>

B. NON-TUBERCULOUS GROUP—

1. Post-Pneumonic Fibrosis	7
2. Bronchiectasis	6
3. Bronchitis	4
	<hr/>
	17
	<hr/>

A.—TUBERCULOUS GROUP:—

1.—*Acute Broncho-Pneumonic Tuberculosis*.—This type of disease occurred in 12 children and proved fatal in 10 of them. With regard to the remaining 2 children, 1 was dismissed irregularly from hospital, and subsequently died at home, while the other was dismissed with evidence of extensive changes in the lungs but without any symptoms. The diagnosis was confirmed bacteriologically in all but 1 case, the child who was irregularly dismissed.

2.—*Acute Miliary Tuberculosis of the Lungs*.—There was only 1 case of this type of disease, the condition being rapidly fatal.

3.—*Bilateral Pulmonary Tuberculosis*.—This was the most common form of the disease dealt with and as a rule it was of an extensive and severe type. It occurred in 74 cases, 25 adults and 49 children. In the former series, the adults, 14 were improved by their residence in hospital, 3 were irregularly dismissed, and 8 died giving a mortality rate of 32 per cent. Of the 49 children improvement was recorded in 24, while 18 died, a mortality rate of nearly 37 per cent. There were 7 irregular dismissals among the children and in 5 of them progress had been unsatisfactory. The tubercle bacillus was recovered from 59 of the cases in this category.

4.—*Unilateral Pulmonary Tuberculosis*.—The disease in the 20 cases of this type was usually of a massive character and tended

to run a chronic course. It occurred in 3 adults and 17 children all of whom made satisfactory progress and were dismissed in a much improved state. The diagnosis was confirmed bacteriologically in 15 of the 20 cases.

5.—*Hilum Adenitis*.—Enlargement of the hilar glands was present in 36 cases, all of whom were children. The results of treatment were satisfactory in that 34 of the cases left hospital in a symptomless state. There was 1 case which was irregularly dismissed before completion of treatment and another died owing to a complicating tubercular peritonitis. The diagnosis was confirmed in only 7 cases.

6.—*Hilum Adenitis with Involvement of the Perihilar Areas*.—This type occurred in 17 cases and all were children. There were no deaths in the series all the patients being dismissed in a much improved state. The tubercle bacillus was isolated from 5 of the cases.

7.—*Tubercular Pleurisy*.—A diagnosis of tuberculosis of the pleura was made in 33 patients, 5 of whom were adults and 28 children. In 14 of the cases there was an associated effusion while under treatment. All the patients were improved and without symptoms when they left hospital, except 3, who left against advice before the completion of treatment. The tubercle bacillus was recovered from the pleural fluid in 7 cases.

B.—NON-TUBERCULOUS GROUP:—

1.—*Post-Pneumonic Fibrosis*.—There were 7 children who were suffering from post-pneumonic conditions of varying severity. The response to treatment was good and they were dismissed in a symptomless condition.

2.—*Bronchiectasis*.—This condition occurred in 6 children but was not of an extensive character. All the patients improved under treatment and were dismissed without any symptoms though they still showed extensive changes in the lungs.

3.—*Bronchitis*.—Of the 4 children admitted with bronchitis 2 were complicated by a chronic enteritis. Improvement was rapid and uninterrupted and they were dismissed well.

(3) ORTHOPÆDIC CONDITIONS.

The 50 cases dealt with under this heading were admitted with non-tuberculous deforming conditions, 43 of them coming through

the Willowbank Orthopædic Clinic, and 7 coming from other sources. It should be noted that among cases admitted with a diagnosis of tuberculosis of bone or joint some are found to be suffering from non-tuberculous lesions. This is recorded in the appropriate sections of the report. While the gross figures for the year show the proportion of tuberculous to non-tuberculous deforming conditions to be 166 to 50, the corrected figures read:—Tuberculous, 130; Non-Tuberculous, 86.

Of the 50 patients to be considered here 27 were males and 23 females, the majority (42) being children of school age. The causes of disability were as follows:—Congenital, 20 cases; rickets, 6 cases; infantile paralysis, 14 cases; spastic paralysis, 2 cases; and other conditions, 8 cases. Of the 14 cases with infantile paralysis 5 were admitted in the second stage of the disease, the disability consisting mainly of loss of power, slight deformity being present in 2 cases only.

The nature of the deformities was as follows:—(a) Congenital Deformities—Torticollis, 9; club foot, 6; dislocation of hip, 3; supernumerary toes and bifid metatarsals, 1; kypho-scoliosis due to hemi-verterba, 1. (b) Rachitic Deformities—Single cases of active rickets with multiple deformities; genu valgum; genu varum; genu valgum et varum; coxa-vara and scoliosis. (c) Infantile Paralysis—Second Stage—Paralysis of arm, 1; arm and leg, 1; trunk and both legs, 1; trunk, arm and leg, 2. Third Stage—Talipes equinus, 4; talipes valgus, 2; talipes varus, 2; and contracture of old scar, 1. Several of the latter cases had extensive loss of power associated with deformities other than those mentioned. (d) Spastic Paralysis—Hemiplegia, 1; talipes valgus due to peroneal spasm, 1. (e) Other Conditions—Fixed joint deformities following suppurative arthritis, 3; Perthé's disease, 2; malunited fracture, 1; hallux valgus, 1; and rigid flat foot, 1.

Operative treatment was carried out in 31 cases, 10 of whom required more than one operation, 46 operations being undertaken as follows:—Osteotomy, 10; tenotomy, 17; tendon transplantation, 3; muscle-slide operations, 2; arthrodesis, 8; amputation, 2; and miscellaneous, 4. Of these patients, 17 had 49 manipulations carried out under general anæsthesia subsequent to operation. Ten patients had manipulative treatment only, 27 manipulations being carried out for congenital dislocation of the hip, 3 cases; pes planus, 2 cases; paralytic deformities, 3 cases; joint deformities, 2 cases.

One patient admitted with torticollis was dismissed without operation because of the presence of persistent otorrhœa and a septic condition of the skin. The remaining 8 patients required only general physio-therapeutic measures including massage, immobilisation and splintage. These were cases of second stage poliomyelitis, 4; active rickets, 1; Perthé's disease, 1; and scoliosis, 2.

During treatment plaster of Paris splints were required in 35 cases, 133 appliances being made as follows:—104 leg and foot plasters, 20 hip spicæ, 3 jackets, 3 fillets, and 3 plaster beds. More permanent supporting appliances to the number of 30 were required in 23 cases as follows:—Walking calipers, 11; leg irons, 6; scoliosis jackets, 5; certalmid hip spicæ, 4; celluloid foot splint, 1; duralumin toe splints, 2; and crutches, 1 pair. Special boots were supplied in 1 case, and 18 cases required alterations to boots as follows:—Soles raised, 4; soles tilted, 11; and metatarsal bars fitted, 3.

Massage exercises and electrical treatment were given as required.

The results of treatment were satisfactory in most cases. In 17 the deformity was entirely corrected, in 22 cases there was marked improvement, while in 9 some improvement was recorded. The average duration of residence was 210 days.

TREATMENT.

Except in a few cases in which the presence of a very active tuberculous lesion contra-indicated exposure on the verandahs, all patients received graduated heliotherapy and ærotherapy. This, together with rest or graduated exercise, suitable diet and a regular sanatorium life formed the basis of the general treatment which aimed at increasing the bodily resistance to tuberculosis or generally improving the body tone in non-tuberculous cases. Local treatment varied with the conditions treated. Cases of bone and joint tuberculosis were immobilised, during recumbency on special appliances and during the ambulant stages in plaster of Paris splints or in more permanent appliances of certalmid, celluloid or metal and leather. Surgical measures were adopted to meet complications such as abscess formation, deformity, or weak union at joints. The treatment given in the pulmonary and orthopædic cases has been described at some length in the sections of the report dealing with these conditions.

Plaster of Paris Work.—During the year 498 plaster appliances and 134 plaster casts were made. The plaster appliances were as follows:—33 jackets, 132 hip spicæ, 309 leg plasters, 7 arm plasters, and 17 plaster beds. The plaster casts on which certalmid, celluloid or metal and leather splints were constructed included 42 jackets, 57 hip spicæ, 25 leg splints, and 10 arm splints. Böhler's irons were fitted to leg plasters in 25 cases and numerous repairs and alterations to plasters were carried out as required.

Splint Department.—The work of this department was varied and comprised the making of 327 new splints, 207 other appliances, and 86 carriage fittings. In addition 163 boots were altered, 237 appliances were erected or adjusted, and 635 major repairs were carried out. It should be noted that 95 of the 327 new splints, 63 of the 163 boot alterations, and 102 of the 635 repairs were for out-patients attending the orthopædic clinic. In connection with the out-patient work a splintmaker attended weekly at the Ashley Sreet Clinic for the purpose of carrying out minor repairs and adjustments. Only major repairs and alterations were sent to the hospital workshop. The splint work actually undertaken at the clinic is not shown in the above figures but is dealt with in the report on the Medical Inspection and Treatment of School Children. The following table shows the work of the splint department in greater detail:—

	Made.			Repaired.			Total.
	In-Patients.	Out-Patients.	Total.	In-Patients.	Out-Patients.	Total.	
Certalmid Splints ...	67	24	91	21	16	37	
Celluloid Splints ...	9	7	16	4	1	5	
Duralumin Splints ...	32	6	38	9	2	11	
Iron Splints ...	64	38	102	29	54	83	
Wooden Splints ...	7	—	7	4	—	4	
Fibre Splints ...	27	—	27	—	—	—	
Leather Appliances ...	18	20	38	8	—	8	
Plaster Splints Finished ...	8	—	8	2	—	2	
Boots Altered ...	100	63	163	7	24	31	
Sandals ...	7	—	7	—	—	—	
Böhler's Irons ...	7	—	7	—	—	—	
Peg Legs ...	—	2	2	—	5	5	
Crutches ...	120	—	120	39	—	39	
Other Appliances ...	50	6	56	3	—	3	
Carriage Fittings ...	86	—	86	390	—	390	
Appliances Fitted or Adjusted	237	—	237	—	—	—	
Other Work ...	15	—	15	17	—	17	
	854	166	1,020	533	102	635	

The certalmid and celluloid splints included 22 jackets, 57 hip spicæ, 23 leg splints, and 5 arm splints. The metal splints, usually with leather finishings, were as follows:—Thomas's walking calipers, 69; Jones's spinal supports, 16; Littler Jones's arm abduction splints, 8; duralumin wrist and hand splints, 24; elbow splints, 3; bed Thomas splints, 2; leg irons, 11; Jones's foot splints, 2; duralumin toe splints, 5. During the year 120 split-ash crutches were made in the splint department and "other work" included the construction of a full size demonstration model of the Mearnskirck adjustable hip and spinal carriage, and a small scale model of the carriage for show at the Empire Exhibition. The alterations to boots were as follows:—Soles raised on leather, wood or pattens, 83; soles tilted, 27; heel tubes fitted, 48; metatarsal bars fitted, 5.

Surgical Treatment.—During the year 256 operations or manipulations under general anæsthesia were carried out. This figure included 120 major operations of which 102 were undertaken for the relief or correction of orthopædic conditions. The total was made up as follows:—

BONE AND JOINT TUBERCULOSIS—

Arthrodesis of Hip ...	...	...	...	...	...	...	5
Arthrodesis of Knee	...	...	...	...	...	...	5
Excision of Ankle ...	...	...	...	...	...	...	2
Synovectomy	...	...	...	...	...	...	2
Arthrotomy ...	...	...	...	...	...	...	1
Osteotomy of Femur	...	...	...	...	...	...	3
Costo-Transversectomy	...	...	...	...	...	...	2
Amputation	...	...	...	...	...	...	8
Sequestrectomy	...	...	...	...	...	...	23
Manipulations	...	...	...	...	...	...	28
Incision of Abscess	...	...	...	...	...	...	8
Scraping of Sinus ...	...	...	...	...	...	...	23
							—

GLANDULAR TUBERCULOSIS—

Excision of Glands	...	...	...	...	...	...	5
Incision of Abscess	...	...	...	...	...	...	2
Scraping of Sinus	...	...	...	...	...	...	16
							—

ABDOMINAL CONDITIONS—

Intestinal Anastomosis	...	...	...	...	...	...	2
Pre-Sacral Neurectomy	...	...	...	...	...	...	1
Sigmoidoscopy	...	...	...	...	...	...	6
							<hr/> 9

GENITO-URINARY CONDITIONS.—

Nephrectomy	...	...	...	...	...	...	3
Circumcision	...	...	...	...	...	...	3
Castration	...	...	...	...	...	...	1
Cystoscopy	...	...	...	...	...	...	10
							—

Radiology.—In the course of the year 1,791 patients were examined radiologically, 3,977 skiagraphs being taken, and 45 screen examinations being made. The visiting radiologist, Dr. F. L. Henderson, and the radiographer, Mr. Sawyer, conducted 97 sessions, while the hospital staff undertook 104 sessions.

Laboratory.—The number of specimens dealt with in the laboratory was 1,196, the majority being examined for the presence or absence of the tubercle bacillus. As in previous years all strains isolated were typed by cultural and biological methods. There were 49 strains isolated from cases of non-pulmonary tuberculosis and 8, or 16 per cent., were found to be of the bovine type. In the pulmonary group of cases 11 out of 107 strains, that is 10 per cent., proved to be of the bovine type.

Education.—The number of children admitted to the school register was 318, while 282 were discharged from it. The average daily attendance was 224. No change was made in the subjects of instruction, handicraft and sewing occupying a proportionately greater time than in an ordinary school.

Training of Nurses.—The year was noteworthy in that the hospital became affiliated for training purposes with the General and Infectious Diseases Hospitals of the Public Health Service. This arrangement permits of probationer nurses being trained for the first part of the State Examination and should help to solve the nursing problem which exists at the present time.

J. A. WILSON,
Physician Superintendent.

TABLE SHOWING CASES DISMISSED OR DIED IN HOSPITAL DURING THE YEAR 1938 WITH AGE AND SEX DISTRIBUTION,
LOCATION OF DISEASE, CONDITION ON ADMISSION AND DISMISSAL AND AVERAGE DURATION OF RESIDENCE.

Distribution of Disease.	Age and Sex Distribution.				Condition on Admission.										Condition on Dismissal.												
	Males.		Females.		General.					Local.					General.					Local.							
	Years.				Total.	Good.	Fair.	Poor.	Very Poor.	Early.	Intermediate.	Advanced.	Healed (Def.).	Very Good.	Good.	Fair.	Poor.	Transferred.	Irregularly Dismissed.	Died.	Not Improved.	Improved.	Much Improved.	Healed. Average Duration of Residence (Days).			
-1	5-10	-15	+15	-1																					5-10	-15	+15
Abdomen	5	9	6	6	26	—	4	7	11	—	22	48	1	11	31	5	—	—	—	—	2	5	6	26	15	1	166
Spine	—	10	6	7	1	24	—	3	5	5	—	13	37	2	20	13	2	—	—	—	1	3	7	9	—	5	23
Dactylitis	—	—	2	—	—	2	3	1	—	—	6	8	1	4	3	—	—	—	—	—	1	1	1	—	—	1	6
Other Bones	—	—	1	2	2	5	—	1	1	1	—	3	8	1	5	2	—	—	—	—	—	—	—	—	—	—	8
Hip	—	3	18	12	—	33	—	3	12	9	—	24	57	3	35	15	3	1	25	10	17	5	42	8	2	—	5
Knee	—	3	3	5	—	11	—	8	6	—	—	14	25	4	19	2	—	—	—	—	—	—	—	—	—	—	19
Ankle and Tarsus	—	5	3	—	—	8	—	3	2	—	—	5	13	5	7	1	—	—	—	—	—	—	—	—	—	—	13
Sacro-Iliac	—	—	1	1	—	2	—	—	—	—	—	—	2	—	1	1	—	—	—	—	—	—	—	—	—	—	2
Shoulder	—	—	—	—	—	—	—	2	—	—	—	2	2	—	1	1	—	—	—	—	—	—	—	—	—	—	1
Elbow	—	—	2	1	—	3	—	—	—	—	—	3	—	2	1	—	—	—	—	—	—	—	—	—	—	—	3
Wrist and Carpus	—	—	—	—	—	—	—	—	1	—	—	1	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—
Other Joints	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cervical Glands	5	11	5	5	—	26	1	7	5	7	1	21	47	6	32	8	1	—	—	—	—	—	—	3	4	—	12
Skin and Soft Tissues	—	—	2	—	2	4	—	—	1	—	—	1	5	—	3	2	—	—	—	—	—	—	—	—	—	—	5
Genito-Urinary	—	—	—	—	—	—	—	—	1	—	—	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1
Pulmonary	2	23	34	29	4	92	1	19	27	42	29	118	210	14	95	90	11	—	152	28	30	—	13	133	14	—	18
Multiple	—	4	2	1	1	8	1	—	—	—	—	2	10	1	2	4	3	—	5	2	3	—	5	—	5	—	—
Orthopaedic	—	2	15	8	2	27	—	3	8	11	1	23	50	3	38	8	1	—	1	21	28	—	44	6	—	—	2
Other	—	—	—	1	—	1	—	—	—	—	—	2	2	1	—	1	—	—	—	—	—	—	—	—	—	—	2
Total	12	77	96	79	8	272	5	44	80	95	32	257	529	42	275	184	26	1	290	98	123	18	204	217	22	1	3

BELLEFIELD SANATORIUM.

Tables showing the type and number of cases of pulmonary tuberculosis discharged from this Sanatorium during 1938, as well as period of residence, are herewith submitted.

A marked reduction in turn-over, as compared with last year is accounted for in great measure by the type of case which was received for treatment. For instance, a much greater number of advanced cases was dealt with necessitating continued accommodation and attention over very long periods. Fewer cases in the early stages were admitted. In all, 160 cases were dealt with, 14 "Early," 123 "Intermediate," and 23 "Advanced" cases. Five deaths took place among those in the advanced group.

All available accommodation was taxed to its utmost limit as in previous years. Many beds were substituted for cots, there seemingly being few children necessitating sanatorium treatment.

It cannot be said with any certainty that as result of treatment the disease has been definitely arrested in many cases. The most that can be said is that the expectation of life has been increased.

Less difficulty than formerly is being experienced in persuading patients to submit to protracted periods of treatment. A more correct appreciation of the insidious nature of the disease by the individual afflicted is apparent.

Treatment by artificial pneumothorax continues to be pursued. Benefit undoubtedly accrues in a majority of the cases where this method is found to be possible. Twenty-seven inductions were attempted, 25 proved successful, and two failed. Refills to the number of 529 were given.

The health of the staff was well maintained throughout the year and little time was lost through sickness. The poultry farm and garden successfully maintained the requisite supply of appropriate produce.

A. YOUNG,
Physician Superintendent.

PART III.

GENERAL HOSPITALS AND OUTDOOR MEDICAL SERVICES.

OUTDOOR MEDICAL SERVICES.

The Outdoor Medical Services arrangements continued practically unchanged during the year. No district was transferred from the part-time to the full-time service, although it is expected that with the completion of new clinics at present under construction other areas will be taken over during the ensuing year.

Staff.—Two additional full-time medical officers were appointed during the year and there was one resignation. Following upon the extension of the City boundary in May, two additional part-time medical officers were taken over from the county areas into the service of the City. The staff now consists of 31 full-time and 10 part-time medical officers, the part-time medical officers mainly working in the peripheral and less densely populated parts of the town. There are 21 nurses, who assist in the work of the clinics and carry out visitation of patients in the districts, 16 clerkesses, and 9 qualified and 5 unqualified pharmacists. The duties of the staff consist of giving medical attendance on persons who are on the Poor Roll and their dependents, and also on the dependents of persons receiving assistance from the Unemployment Assistance Board. All applications for medical attention must thus come by way of the Public Assistance Department.

The table on page 383 gives a summary of the work done during the years 1931-1938 inclusive. The full-time service was introduced in a large part of the City in 1935. The following year showed a very sharp rise in the number of visits and in consultations at the clinics, and a further marked increase took place in 1936-37. In 1938, however, the figures were but little altered from the previous year, so that it appears as though the work were now becoming stabilised. The domiciliary visitation was mainly in connection with the treatment of persons on the Sick Poor Roll, the other categories being relatively unimportant.

Of the total of 488,402 units, 444,425 represent the work done by the full-time staff and the remainder the work done by the part-time staff.

OUTDOOR MEDICAL SERVICES.

TABLE SHOWING COMPARISON OF WORK DONE BY THE OUTDOOR MEDICAL OFFICERS DURING THE YEARS 1931-1938 INCLUSIVE.

Year.	Visits.				Consultations.				Sessions at Public Assistance Department Offices.	Number of Units.
	Persons or their Dependents on Relief from Unemployment Assistance Board.	Persons or their Dependents on Relief from Unemployment Assistance Board.	Persons or their Dependents on Relief from Unemployment Assistance Board.	Persons or their Dependents on Relief from Unemployment Assistance Board.	Persons or their Dependents on Relief from Unemployment Assistance Board.	Persons or their Dependents on Relief from Unemployment Assistance Board.	Persons or their Dependents on Relief from Unemployment Assistance Board.	Persons or their Dependents on Relief from Unemployment Assistance Board.		
	3,472	5,044	4,674	8,520	7,277	11,932	5,776	4,202	1,708	171,941
	19,758	25,115	21,845	32,723	32,137	47,811	64,898	60,927	1,709	224,254
	1,153	1,368	1,686	1,804	1,934	2,015	2,184	2,351	1,702	234,330
	24,383	31,527	28,205	43,047	41,348	61,758	72,858	74,944	1,707	317,976
	88,330	115,110	134,104	171,985	210,608	248,975	285,103	302,560	1,712	356,625
	256,090	278,634	293,926	300,048	300,048	300,048	300,048	300,048	1,822	443,553
	25,687	18,271	25,687	18,271	25,687	18,271	25,687	18,271	1,148	487,575
	300,048	300,048	300,048	300,048	300,048	300,048	300,048	300,048	1,146	488,402

In addition, during 1938, the Medical Officers carried out the undernoted works:—

No. of Vaccinations performed ...	...	...	...	...	...	...	1,519
No. of Vaccinations postponed through illness ...	...	...	...	...	...	...	1,703
No. of Cases of Returned Insusceptible to Vaccination ...	...	...	...	...	...	...	73

One consultation at a clinic = 1 unit
 One domiciliary visit ... = 2½ units
 One session at Public Assistance Department Office = 2½ "

The increasing demand upon hospital accommodation has given rise to acute shortage of beds from time to time, and the position appears to be getting worse each year. During the winter, waiting lists have to be established for the General Hospitals, and these lists must be carefully scrutinised and priority given to urgent cases. It is also necessary to maintain contact with persons who are on the waiting list to ensure that they are receiving attention in the meantime. The establishment of a waiting list has made it imperative that all cases recommended to the Public Assistance Department by private practitioners for admission to hospital shall be reviewed by the District Medical Officers. District Medical Officers are kept informed as to the state of hospital accommodation, and they visit each case and form an opinion as to the necessity for hospital treatment and the relative urgency. These visits and the necessary follow-up, and the making and communicating of decisions take up a considerable amount of time, and it became necessary to utilise practically the whole time of a medical officer to administer and supervise the waiting list. The number on the waiting list at times reached 100 or more, although in the main the period of waiting was not long. The position thus was never allowed to become very serious, but in the absence of strict control much confusion would have arisen.

The Medical Boards held at Stobhill Hospital for the purpose of determining fitness for work continued in operation, and one member of the Outdoor Medical Staff attended at each Board. Cases of doubt where a second opinion is required are referred to these Boards by the District Medical Officers or by the Daily Relief Committee.

The evening, night, and week-end service, which operates from the Central Office, continues as before. It is now necessary to have four medical officers on this duty during the busy periods in the winter. Other members of the staff have occasionally to be called out in emergency. Usually the work of visiting during these tours of duty is heavy, but on the whole, visits are promptly paid. Extra duty medical officers are stationed at the Central Office of the Department, and travelling outwards from the centre of the City raises the problem of transport. This problem will become more acute when further outlying areas are taken under the full-time service. There is evidence still that patients and their relatives do not always understand that the night and week-end service is intended to be one for emergencies, and a considerable number of

visits are paid to persons with trivial complaints which do not warrant the attendance of a special medical officer. Such cases are usually referred to the appropriate clinic for treatment.

The work of the nurses appointed under the Outdoor Medical Services continues to have a beneficial effect. Their duties are mainly concerned with visiting in their districts patients to whom their attention is directed by the District Medical Officer. The nurses are prepared to give nursing care on occasion, but their main purpose is educational and to act more in the capacity of a Health Visitor among the sick poor of the City. Nurses are expected to keep in close association with the Child Welfare and other branches of the Public Health Service.

The facilities of specialist clinics are available to District Medical Officers. Patients can be sent to these clinics when special advice is required regarding diagnosis or treatment. These clinics have been set up in the Eastern District Hospital, the Western District Hospital, and in the Southern General Hospital. The policy is also being gradually developed of feeding certain types of case into hospital via specialist clinics, *e.g.*, non-urgent surgical cases, ear, nose and throat cases, and gynaecological cases. In this way the hospital staff can adjust the work to the best advantage.

Premises.—There were no changes in premises occupied during the year, although a new clinic at Killearn Street, Possilpark, is approaching completion. New clinics at Sandy Road, Crail Street, and Maryhill are on hand, and construction has either begun or is expected to begin shortly.

GENERAL HOSPITALS.

STOBHILL AND EASTERN AND WESTERN DISTRICT HOSPITALS.

In the Annual Report, 1936, a complete account of the General Hospital Services of the Corporation was given. The plan of administration remains unchanged.

Table A (page 396, in the Appendix of Tables following the Reports on the General Hospitals) shows the number of beds available in the hospitals for the year now under review. Pressure on hospital accommodation has become gradually more acute and

towards the end of the year a waiting list had again to be established. A circular letter was addressed to practitioners, advising them of the difficulties in finding accommodation, and asking them to assist by giving domiciliary treatment wherever possible, particularly to chronic patients. The circular letter, however, made no appreciable difference.

It is interesting to note that admissions by certificate of the Outdoor Medical Officers are forming a decreasing proportion of the total admissions. In other words, Outdoor Medical Officers are treating more of their patients at home, while private practitioners are tending to send more cases to hospital.

Table B (page 397) shows the admissions, dismissals, deaths, etc., from 1931 to 1938. During the past year the number of admissions has decreased, but the average days' residence per patient has increased. This is largely due to the greater proportion of chronic conditions, such as degenerative diseases in aged persons, which are being admitted to the hospitals. These cases require nursing services only and little can be done for them from a curative point of view.

Table C (page 398) gives the admissions, dismissals, deaths, and cases remaining in all the Corporation General Hospitals month by month for the year 1938.

Table D (page 398) shows the method of admission of all patients dismissed from these hospitals during the year. It will be noted from this Table that 6,833 cases were admitted to the three hospitals on a certificate from a general practitioner other than a District Medical Officer. Again, about one-third of the admissions to the Western and Eastern District Hospitals were gate admissions, that is, cases where the patients presented themselves for treatment at the admission room of the hospital. These two methods of admission account for almost half of the total.

Table E (page 399) shows the disposal of patients dismissed from all Corporation General Hospitals. The total dismissals from Stobhill numbered 12,342, compared with 14,199 in the previous year. The dismissals from the Eastern District Hospital were also reduced, from 3,706 to 3,182. The decline in the number of patients treated is accounted for by the increase in proportion of old and chronic patients.

Out-Patient Clinics.—General Out-Patient Clinics are held at the Eastern and Western District Hospitals and are run by the Resident Medical Staff.

A special Surgical Clinic and a Skin Clinic are held at the Eastern District Hospital for the after-treatment of cases. These Clinics are under the direction of the respective Consultants from Stobhill Hospital.

Ante-natal and Post-natal Clinics have been in operation at both of these Hospitals for some considerable time.

At the Western District Hospital, under the direction of Dr. Morris and his staff from Stobhill Hospital, a special Out-Patient Clinic has been established for the follow-up of diabetic, cardiac, and anæmia cases discharged from hospital.

Ground has been purchased adjacent to the Eastern District Hospital and it is proposed to build a large out-patient centre for the follow-up of patients dismissed from the Corporation General Hospitals and there to make fuller arrangements for specialist consultations for cases referred by District Medical Officers.

Dental Treatment.—Two full-time dentists are now in charge of the dental treatment. Owing to the great shortage of accommodation for in-patients, it has been necessary to curtail the admissions for dental extraction.

During the year 1938, 4,862 persons attended at Stobhill, Eastern and Western District Hospitals for dental treatment, the aggregate number of attendances being 9,494. The majority of these were out-patients, and the following table gives a summary of the main items of work done.

SUMMARY OF WORK DONE IN DENTAL DEPARTMENTS.

			Stobhill Hospital.	Western District Hospital.	Eastern District Hospital.	Total.
No. of Sessions	...	...	348	87	116	551
Attendances	..	...	5,673	932	2,889	9,494
Extractions	...	...	11,942	1,802	3,671	17,415
Total number of persons supplied with dentures	...	...	398	89	326	813

Applications for dentures during the year were more numerous than in previous years.

Staff—Medical and Surgical.—The following new appointments were made to the visiting staffs at Stobhill and the Eastern and Western District Hospitals:—

Four Visiting Assistant Physicians.
 One Visiting Assistant Dermatologist.
 One Visiting Assistant Surgeon.
 One Visiting Dentist.

The following table gives the numbers and allocations of visiting consultants to the three hospitals:—

	Stobhill Hospital.	Eastern District Hospital.	Western District Hospital.
Visiting Physicians	4	1	1
Assistant Visiting Physicians ...	4	—	—
		1	
Visiting Surgeons	1		
Assistant Visiting Surgeons ...	1		2
		1	
Visiting Gynaecologists and Obstetricians	1		1
Assistant Visiting Gynaecologist and Obstetrician	—		1
Visiting Psychiatrists	2	1	—
	1		
Visiting Aurists and Laryngologists ...			
Assistant Visiting Aurists and Laryngologists		4	
Visiting Dermatologist	1	—	—
Assistant Visiting Dermatologist ...	1	—	—
Ophthalmologist	1	—	—
	1		
Radiologist		1	
Assistant Radiologist		1	
Dentists		2	

The four newly appointed assistant physicians to Stobhill Hospital are attached to Dr. Morris's unit and also to the University of Glasgow. The unit is already proving itself a valuable asset to the teaching of medical students.

Pathological Department and Laboratories.—The following table gives a summary of the work of this department during the year. In each item of the work in this department there has been an increase over the previous year.

No. of Autopsies	353
Histological Reports	613
Number of Biological Tests	278
Number of Bacteriological and General Serological Reports	8,493
Wasserman's Reaction	9,233
Kahn's Tests	3,505
Colloidal Gold Test	284
Biochemical Reports (Block 15)	3,118

Refereeing of Cases, Specialist Examinations, Etc.—The total number of cases referred to Stobhill Hospital for further opinion as to fitness for work was 1,662 which shows a considerable increase over the figure for last year. In addition, 2,027 out-patients were referred to the Visiting Consultants for examination at Stobhill Hospital. One hundred and seventy-three patients, principally cases of diseases of ear, throat and nose, were referred by the School Medical Officers.

Electro-Medical Department.—The Electro-Medical and Massage Department at Stobhill Hospital is now well equipped with modern apparatus for X-ray diagnosis and treatment, and physiotherapy in all its branches. The following table shows the amount of work done in this department.

WORK DONE IN ELECTRO-MEDICAL DEPARTMENT.

	Stobhill Hospital.	Eastern District Hospital.	Western District Hospital.
No. of Radiographic Films taken ...	13,303	324	1,615
No. of Examinations with Barium Meals	1,222	—	—
No. of Deep Therapy Treatments ...	3,715	—	—
No. of Cases treated by Radium ...	38	3	1
No. of Sunlight Treatments given ...	1,486	453	2,206
No. of Cases treated by Massage ...	1,747	125	161
No. of Massage Treatments given ...	17,832	3,334	4,019
No. of Cases treated by Electricity ...	240	126	117
No. of Electrical Treatments given ...	4,735	2,059	2,527
Total Treatments given	42,331	6,173	10,646

Deaths in Hospital.—There were 2,420 deaths in Stobhill and Eastern and Western District Hospitals during the past year, giving a case mortality of 11.6 per cent. This shows a slight decrease over last year's figure. In 441 instances, the patients died within 48 hours of admission, the various causes of death being shown in Table F.

Obstetrical Section.—Tables G, H, J, K, and L (pages 400 to 402) give statistics of the obstetrical work done in Stobhill, the Eastern and Western District Hospitals. In his personal report on the work in Stobhill Hospital the visiting obstetrician states that more than one-fifth of the deliveries could be regarded as abnormal in some degree. In 533 cases analgesics were administered for the relief of pain, use being made of "twilight sleep," barbiturate drugs and gas and oxygen. Blood transfusion was carried out in 97

cases. The incidence of sepsis and pyrexia and the maternal mortality are shown in Table L.

Teaching of Students.—Classes on Clinical Medicine are held in Stobhill Hospital and in the Eastern District Hospital. Final year students are given intensive training by the physicians and surgeons attached to the Corporation hospitals. Classes on Mental Diseases are held in the Mental Observation Wards at the Eastern District and at Stobhill Hospitals. Final examinations for the degrees of M.B., Ch.B. have been held at Stobhill Hospital on several occasions.

Nursing Staff.—The following tables give some details of the nursing staffs attached to Stobhill and the Eastern and Western District Hospitals, and also show the progress of the nursing staffs in connection with the examination of the General Nursing Council and the Central Midwives' Board.

NURSING STAFF IN STOBHILL, EASTERN DISTRICT AND
WESTERN DISTRICT HOSPITALS AT 31ST DECEMBER, 1938.

	Stobhill Hospital.	Eastern District Hospital.	Western District Hospital.
Matrons	1	1	1
Deputy or Assistant Matrons	1	1	1
Day and Night Superintendents ...	4	1	1
Sister Tutors	3	1	—
Junior Assistant Superintendents ...	3	—	1
Ward Sisters	47	11	11
Staff Nurses	20	7	10
Probationer Nurses—			
1st Year	65	13	} 40
2nd Year	104	12	
3rd Year	80	12	
4th Year	89	20	
	<hr/> 417	<hr/> 79	<hr/> 65

NURSES ENGAGED FOR TRAINING DURING THE YEAR.

	Stobhill Hospital.	Eastern District Hospital.	Western District Hospital.
State Registered—			
Supplementary Register for Fevers	24	1	—
State Registered—			
Supplementary Register for Mental Diseases	2	—	—
From Robroyston Hospital (affiliated Hospital)	9	5	3
From Samaritan Hospital (affiliated Hospital)	11	—	—
New Probationers	65	20	16

In the three hospitals 99 nurses passed the General Nursing Council's examination in General Nursing and 71 passed the examination of the Central Midwives' Board. In Stobhill, two nurses passed the final examination for registration in Children's Diseases. Two nurses from Stobhill passed the first part of the examination of the Society of Radiographers, and one passed the final examination.

SOUTHERN GENERAL HOSPITAL.

REPORT FOR YEAR ENDED 31ST DECEMBER, 1938.

Accommodation.—The accommodation remained practically the same as in 1937. Two hundred beds for medical patients were unoccupied in the centre medical block at present undergoing reconstruction. The available accommodation was fully taxed throughout the year, and at times the wards were seriously overcrowded. In Table A (page 396) in the Appendix of Tables following the Reports on the General Hospitals, the accommodation of the hospital is given sub-divided into categories, Medical, Surgical and Special, Mental Observation, etc., etc. In addition to the accommodation shown in Table A, there were extra beds and cots in the wards throughout the greater part of the year. The pressure on accommodation was severe in the Maternity Department, as shown in the increased number of cases delivered.

Admissions and Dismissals.—The admissions and discharges show a slight increase over 1937, and the admissions for 1938 are the maximum which can be dealt with by the hospital until such time as further accommodation is available. A comparison with the figures for the year 1934 shows that the admissions have almost doubled. Table B (page 397) gives the admissions, dismissals, deaths, in-patient days, and average days' residence year by year from 1931 to 1938. The admission rate remained fairly constant throughout the year with only a slight drop at mid-summer. There was a marked drop in the death-rate compared with the previous year. The average days' residence per patient for the year was increased, but this is accounted for by the inclusion as from 1st January, 1938, of approximately 300 bed-ridden medical patients accommodated in the centre block; these patients were not included in the returns for previous years, and a large number of the patients are suffering from chronic diseases.

There have been increases in admissions under the following headings:—

- (1) From the Education Health Service, due to increased number of children referred to the Ear, Nose and Throat Department for operation and treatment;
- (2) Gate admissions, including a larger number of patients admitted to the Maternity Department; and
- (3) Increased number of births in the hospital following the greater number of maternity patients dealt with.

Table D (page 398) shows the method of admission of all cases.

During the latter half of the year, following the opening of the out-patient department, a larger number of persons being discharged from the hospital were referred to the clinic for after-care.

Out-Patient Clinics.—The new out-patient clinic at the hospital gate was opened on 1st June, 1938. Prior to that date out-patients attended at the various wards. Following concentration of the work in one building, there has been a considerable increase in the number of patients dealt with as compared with previous years. The following shows the numbers of individual patients who attended the clinic:—

(a) Hospital out-patients	...	...	...	...	572
(b) Cases referred to Consultant for examination and opinion	...	...	...	...	214
(c) Casualty Department and cases referred by District Medical Officers for out-patient treatment...	...	...	...	...	2,161
Total	...	...	...	...	<u>2,947</u>

Dental Treatment.—With regard to in-patient treatment for dental cases, the dental surgeon devotes one morning of each week to the treatment of patients in the wards, including an operating session for extractions. In addition he attended to out-patients to the number of 1,737 during the year. These out-patients are almost entirely cases referred by the District Medical Officers for treatment, mainly for extractions and for the supply of dentures.

Resident Staff.—There were 14 resident medical officers on the staff at the end of the year. These were as follows:—

- 1 Medical Superintendent;
- 1 Deputy Superintendent;
- 1 Senior Assistant Medical Officer;
- 1 Medical Registrar;
- 1 Surgical Registrar; and
- 9 Junior Assistant Medical Officers

Visiting Medical Staff.—The visiting staff consists of :—

- 1 Visiting Physician ;
- 1 Assistant Visiting Physician ;
- 1 Visiting Surgeon ;
- 1 Assistant Visiting Surgeon
- 1 Obstetrician and Gynaecologist ;
- 1 Assistant Obstetrician and Gynaecologist ;
- 1 Aurist and Laryngologist ;
- 1 Assistant Aurist and Laryngologist ;
- 1 Dermatologist ;
- 1 Neuro-Psychiatrist ;
- 1 Ophthalmologist ;
- 1 Dental Surgeon ; and
- 1 Pathologist.

Teaching of Medical Students.—The visiting surgeon held a clinic for medical students during the three sessions of the year, at which 43 students attended.

Teaching of Nurses.—The number of probationer nurses enrolled during the year was 53. Fifty-seven nurses passed the preliminary State examination and 88 passed the final examination. The hospital was recognised as a training school for the Certificate of the Central Midwives' Board on 1st September, 1938, and teaching on this subject was commenced immediately.

Medical Statistics.—Table I in the Appendix shows the short classification according to disease of patients dismissed during the year. No particular comment falls to be made on these figures. Table III shows the operations performed in the hospital. During 1938 the number of operations performed under general and spinal anæsthesia was 1,716 compared with 1,470 in the previous year, and the corresponding figures as regards operations under local anæsthesia were 1,579 and 1,249. There is thus evidence of a considerable increase in the amount of operative work, and this is particularly evident as regards the General Surgical, Obstetric, and Ear, Nose and Throat Departments.

Pathological Work.—The pathological work of the hospital continues to be carried out by the Department in Stobhill Hospital.

The following are figures representing the work done on behalf of the Southern General Hospital during the year:—

Histological Reports	...	...	...	...	97
Bacteriological Reports	...	...	...	...	1,145
Autopsies	...	...	...	...	38
Wassermann Reactions	...	...	...	...	1,931
Colloidal Gold Tests	...	...	...	...	84
Kahn Tests	...	...	...	...	548
Biological Tests	...	...	...	...	58

X-Ray Department.—Until the end of the year, the X-ray work of the hospital was carried out in Stobhill Hospital. The new X-ray Department is, however, nearing completion, and it is anticipated that it will be opened early in 1939.

Deaths in Hospital.—Nine hundred and thirty-one patients died in hospital during the year, giving a case mortality of 14.7 per cent. over all dismissals. Table F in the Appendix shows details of 155 patients who died within 48 hours of admission to hospital.

Obstetrical Section.—Tables G, H, J and K in the Appendix give particulars of the obstetrical work carried out during the year. The number of cases delivered in hospital was 1,075, as compared with 812 in the previous year. Abortions and miscarriages amounted to 384 as compared with 307.

Table L in the Appendix shows, after adjustment made in respect of patients not confined or aborting in the hospital, the number of cases of fever and pyrexia, together with the total number of deaths. Ten deaths occurred during the year, one from puerperal fever and nine from non-septic causes, the total maternal death-rate in the hospital being 8.8 per 1,000 births. Further notes on these figures are appended to Table L.

Mental Observation Wards.—The report on the work of the mental observation wards is given in the Report on Mental Services, page 419.

Reconstruction and Alterations.—The reconstruction work in the hospital continued throughout the year, and the following are some of the main operations carried out:—

- (1) Continued reconstruction of the wards in the centre medical block, including installation of lift.
- (2) Provision of mess-room attached to the kitchen for the use of maids and night nurses ; this enables hot meals to be supplied to the nursing staff on duty during the night.
- (3) The Maternity Department was transferred to wards which had been reconstructed, with the addition of a new labour room, babies' bathroom sterilising equipment, etc.
- (4) The existing building at the gate was reconstructed and opened to provide accommodation for the various out-patient clinics ; in addition to this, as detailed on separate sheet, the Outdoor Medical Services are also accommodated in this building. Advantage has been taken of the facilities provided with a resultant saving to bed accommodation in the hospital.
- (5) The garage accommodation was reconstructed and enlarged, and in addition, lavatories were provided for visitors at the hospital entrance.
- (6) Accommodation was provided for an X-ray Department, and new equipment was installed ; this was completed at the end of the year.
- (7) Other minor alterations were completed, including modernising the surgical theatre with installation of new sterilising plant ; overhaul of an acute medical ward ; overhaul and tiling of connecting corridor between medical blocks ; railings and stone parapets surrounding the hospital buildings were removed and the roads remade ; the lay-out of the grounds was improved ; and two condemned houses were demolished.

TABLE A.
GENERAL HOSPITALS—ACCOMMODATION.

	Total Accommodation.	Medical Surgical and Special.	Mental Observation.	Maternity.		Sick Children.	Healthy Children.	Lunatics.
				Beds.	Cots.			
Stobhill Hospital ...	1,867	1,135	278	70	56	160	168	—
Marion Reid Home ...	70	—	—	—	—	—	70	—
Eastern District Hospital ...	327	237	50	18	22	—	—	—
Western District Hospital ...	294	230	—	32	32	—	—	—
Southern General Hospital ...	1,600	928	128	65	31	59	—	389
	4,158	2,530	456	185	141	219	238	389

TABLE SHOWING COMPARISON OF ADMISSIONS, DISMISSALS, DEATHS, AND IN-PATIENTS IN THE CORPORATION GENERAL HOSPITALS DURING 1931, 1932, 1933, 1934, 1935, 1936, 1937, AND 1938.

Hospital.	Year.	Admissions.	Dismissals.	Deaths.	In-Patient Days.	Average Days Residence.	Percentage of Deaths to Dismissals.
Stobhill ...	1931	11,266	9,677	1,484	569,064	50.99	15.3
	1932	14,213	12,255	1,718	625,070	44.73	14.0
	1933	13,812	12,319	1,535	610,820	44.03	12.6
	1934	14,420	12,819	1,609	614,903	42.62	12.6
	1935	14,208	12,419	1,683	632,263	44.83	13.6
	1936	13,452	11,842	1,676	645,649	47.76	14.2
	1937	14,054	12,396	1,803	634,859	44.71	14.5
	1938	12,363	10,739	1,603	608,453	49.29	14.9
	1931	3,225	2,880	348	99,178	30.72	12.1
	1932	3,720	3,354	364	101,867	27.40	10.8
Eastern District ...	1933	3,961	3,518	440	100,255	25.33	12.5
	1934	3,855	3,372	478	103,057	26.77	14.2
	1935	4,001	3,480	499	108,882	27.36	14.3
	1936	3,666	3,214	479	114,572	31.02	14.9
	1937	3,764	3,236	470	114,475	30.89	14.5
	1938	3,157	2,732	450	113,889	35.79	16.5
	1931	4,168	3,925	238	82,276	19.76	6.1
	1932	5,042	4,708	331	85,642	16.99	7.1
	1933	4,428	4,100	300	78,591	17.86	7.3
	1934	5,139	4,833	314	86,743	16.85	6.5
Western District ...	1935	5,534	5,182	338	91,593	16.59	6.5
	1936	5,383	5,019	335	91,437	17.08	6.7
	1937	5,321	5,001	357	91,914	17.15	7.1
	1938	5,404	5,011	367	92,729	17.24	7.3
	1931	3,483	2,864	686	204,333	57.56	24.0
	1932	4,077	3,331	679	197,774	49.32	20.4
	1933	3,942	3,259	751	192,916	48.11	23.0
	1934	4,067	3,304	763	182,586	44.89	23.1
	1935	4,678	3,754	883	189,263	40.81	23.5
	1936	7,020	5,706	1,232	217,183	31.30	21.5
Southern General ...	1937	7,245	6,028	1,218	232,096	32.03	20.2
	1938	7,268	6,348	931	344,146	47.28	14.7
	1931	22,142	19,346	2,756	954,851	43.20	14.2
	1932	27,052	23,648	3,095	1,010,353	37.78	13.1
	1933	26,143	23,196	3,046	982,582	37.44	13.1
	1934	27,481	24,328	3,164	987,289	35.90	13.0
	1935	28,421	21,835	3,403	1,022,006	36.19	13.7
	1936	29,521	25,781	3,722	1,068,841	36.23	14.4
	1937	30,384	25,661	3,848	1,073,344	35.18	14.4
	1938	28,192	24,830	3,351	1,159,217	41.13	13.5
Totals ...							

TABLE C.

SUMMARY OF ADMISSIONS, DISMISSALS, AND DEATHS FOR THE YEAR
ENDED 31ST DECEMBER, 1938.

	Admitted.	Dismissed.	Died.	Remaining	Days' Residence.
January	2,709	2,049	359	3,461	104,122
February	2,250	2,083	278	3,350	94,161
March	2,549	2,236	279	3,384	105,190
April	2,319	2,092	296	3,315	99,425
May	2,513	2,290	285	3,253	102,470
June	2,325	2,189	267	3,122	94,649
July	1,909	1,945	262	2,824	91,495
August	2,207	1,874	233	2,919	89,484
September	2,256	1,981	270	2,924	89,016
October	2,322	1,947	250	3,049	92,746
November	2,455	2,000	269	3,235	94,891
December	2,378	2,144	298	3,171	101,568
	28,192	24,830	3,351	—	1,159,217

TABLE D.

TABLE SHOWING THE METHOD OF ADMISSION OF ALL CASES DISMISSED
FROM THE GENERAL HOSPITALS DURING THE YEAR.

Method of Admission.	Stobhill Hospital.	Eastern District Hospital.	Western District Hospital.	Southern General Hospital.	Total.
On certificate of District Medical Officer	4,140	697	466	2,330	7,633
On certificate of other practitioner ...	5,364	691	778	2,511	9,344
Per hospital consultant	233	46	3	54	336
Per specialist clinic	186	9	6	123	324
Transferred from other Corporation					
General Hospital	117	11	7	28	163
From infectious disease hospital ...	165	4	4	15	188
From voluntary hospital	94	15	8	60	177
From poorhouse	101	—	2	181	284
From Maternity Hospital (including overflows)	294	1	1	12	308
Gate admissions	29	1,167	1,732	583	3,511
Arrangements with other Authorities	24	—	—	59	83
Born in hospital (legitimate)	1,182	470	912	993	3,557
Born in hospital (illegitimate) ...	143	40	78	61	322
Per Public Assistance Department ...	59	2	—	7	68
Per prison or police	118	25	—	18	161
From asylums	25	—	—	10	35
Per Education Health Service	1	—	1,381	233	1,615
Per Tuberculosis Officer, etc.	2	—	—	—	2
Others	65	4	—	1	70
	12,342	3,182	5,378	7,279	28,181

TABLE E.

TABLE SHOWING DISPOSAL OF CASES DISMISSED FROM THE GENERAL HOSPITALS DURING THE YEAR ENDED 31ST DECEMBER, 1938.

To—		To—	
Own home	22,528	Tuberculosis Hospital ...	73
Other Corporation General Hospitals	129	Poorhouse	332
Asylum	358	Own Parish	5
Convalescent Home ...	4	Public Assistance Dept. ...	36
Voluntary Hospital ...	4	Police	18
Out-patient Clinic ...	572	Boarded-out	225
Infectious Disease Hospital	363	Died	3,351
		Others	183
			<u>28,181</u>

TABLE F.

TABLE SHOWING CAUSE OF DEATH OF PATIENTS DYING WITHIN 48 HOURS OF ADMISSION.

Cause of Death.	Stobhill	Eastern District	Western District	Southern General	Total
Acute Pneumonia	22	8	12	8	50
Acute Bronchitis	2	2	—	2	6
Chronic Bronchitis	19	8	8	7	42
Cardiac Disease	51	12	19	24	106
Cerebral Haemorrhage or Thrombosis	27	9	15	17	68
Diseases of the Digestive System	21	5	9	10	45
Malignant Disease	13	4	4	14	35
Violence	4	3	2	—	9
Congenital Debility and other Diseases of Early Infancy	55	10	17	28	110
Other Causes	59	12	9	45	125
	<u>273</u>	<u>73</u>	<u>95</u>	<u>155</u>	<u>596</u>

TABLE G.

THE WORK OF THE OBSTETRICAL DEPARTMENTS OF THE GENERAL HOSPITALS—COMPARATIVE FIGURES.

			Ante- Natal Cases Dismissed Undelivered.	Cases Delivered in Hospital.	Cases Admitted after Delivery Outside.	Abortions.	Total.
1930 (7 months)	...	...	183	897	32	134	1,246
1931	...	...	330	1,828	25	294	2,477
1932	...	...	517	2,430	49	597	3,593
1933	...	...	576	2,582	71	709	3,938
1934	...	...	644	3,103	81	746	4,574
1935	...	...	607	3,017	63	1,065	4,752
1936	...	...	832	3,389	95	1,131	5,447
1937	...	...	750	3,710	88	913	5,461
1938	...	...	772	3,990	87	967	5,816

Groups shown as a Percentage of each Year's Total.

1930 (7 months)	...	...	14.7	71.9	2.6	10.8	100
1931	...	...	13.3	73.8	1.0	11.9	100
1932	...	...	14.4	67.6	1.4	16.6	100
1933	...	...	14.6	65.6	1.8	18.0	100
1934	...	...	14.1	67.8	1.8	16.3	100
1935	...	...	12.8	63.3	1.3	22.3	100
1936	...	...	15.3	62.2	1.7	20.8	100
1937	...	...	13.7	68.0	1.6	16.7	100
1938	...	...	13.3	68.6	1.5	16.6	100

TABLE H.

GENERAL HOSPITALS—OBSTETRICAL SECTIONS.

DISMISSALS DURING 1938.

		Stobhill Hospital.	Eastern District Hospital.	Western District Hospital.	Southern General Hospital.	Total.
<i>Cases Delivered in Hospital—</i>						
Dismissed well	...	1,338	512	1,021	1,062	3,933
Died in Hospital	...	11	1	6	7	25
Transferred	...	11	9	6	6	32

Total dismissals of cases delivered in Hospital	1,360	522	1,033	1,075	3,990
---	-------	-----	-------	-------	-------

Method of Admission of above Cases—

<i>Admitted during ante-natal period for treatment and delivered in Hospital</i>					
...	...	128	54	59	138
Admitted to labour ward	958	467	973	936	3,334
<i>Admitted to labour ward (via Glasgow Royal Maternity Hospital)</i>					
...	...	274	1	1	1
277					
Total	...	1,360	522	1,033	1,075
3,990					

	Stobhill Hospital.	Eastern District Hospital.	Western District Hospital.	Southern General Hospital.	Total.
Cases admitted during ante-natal period—Dismissed undelivered	258	102	110	302	772
Cases admitted after delivery	53	2	3	29	87
Abortions and Miscarriages	442	74	67	384	967
Infants dismissed alive	1,245	473	961	1,005	3,684
„ still-born	58	18	47	62	185
„ neo-natal deaths	80	37	29	49	195
Total	1,383	528	1,037	1,116	4,064

TABLE J.

REASON FOR ADMISSION OF CASES ADMITTED TO ANTE-NATAL WARD AND DISMISSED UNDELIVERED.

	Stobhill	Eastern District	Western District	Southern General	Total
<i>toxaemias of Pregnancy—</i>					
Hyperemesis	26	3	5	37	71
Albuminuria	44	19	15	62	140
Eclampsia	2	2	—	—	4
Total	72	24	20	99	215
<i>abnormal Presentation or Disproportion—</i>					
Breech Presentation	10	4	2	9	25
Transverse Presentation	—	1	—	1	2
Twin Pregnancy	—	—	—	—	—
Contracted Pelvis	5	—	1	2	8
Large or Abnormal Child	—	—	—	—	—
Total	15	5	3	12	35
<i>concurrent Diseases independent of Pregnancy—</i>					
Cardiac Disease	7	4	5	7	23
Renal Disease	5	2	3	1	11
Pulmonary Tuberculosis	3	—	—	2	5
Other Respiratory Diseases	14	5	2	16	37
Other Diseases	82	15	13	52	162
Total	111	26	23	78	238
<i>other Reasons</i>	60	47	64	113	284
Grand Total	258	102	110	302	772

TABLE K.

CASES WITH COMPLICATIONS OF PREGNANCY ADMITTED DIRECT TO LABOUR WARD WITHOUT PREVIOUS TREATMENT IN THE ANTE-NATAL SECTION.

		Stobhill	Eastern District	Western District	Southern General	Total
Toxaemias of Pregnancy	...	55	27	13	66	161
Abnormal Presentation	...	42	25	45	38	150
Disproportion	... ..	16	18	30	5	69
Placenta Praevia	...	9	2	6	6	23
Others	... ..	75	16	62	71	224
Total	...	197	88	156	186	627

TABLE L.
PUERPERAL FEVER AND PYREXIA.

Hospital.		No. of Cases.		Cases per 1,000 Births.		No. of Deaths.		Deaths per 1,000 Births.		Case Mortality.	
		Fever.	Pyrexia.	Fever.	Pyrexia.	Fever.	Non- Septic.	Fever.	Non- Septic.		
Stobhill	39	15	28.7	11.0	3	18	2.2	13.2	7.7
Eastern District	12	7	23.0	13.4	1	3	1.9	5.7	8.3
Western District	8	7	7.6	6.6	—	7	—	6.7	—
Southern General	17	28	14.9	24.6	1	9	0.9	7.9	5.9
Total	76	57	18.6	14.0	5	37	1.2	9.1	6.6

Note.—Number of deaths associated with General Hospitals equals 48.

1 septic abortion in Southern General Hospital included in above table died in Robroyston Hospital.

4 non-septic deaths in Stobhill Hospital are excluded because the patients were delivered outside of hospital.

2 septic abortion deaths in Stobhill Hospital are also excluded, 1 as the patient was septic prior to admission, and 1, having sickened in 1937, was included in the table for that year.

TABLE I.—GENERAL HOSPITALS.—NUMBER OF CASES DISMISSED FROM EACH HOSPITAL FOR THE YEAR ENDED 31ST DECEMBER, 1938, ARRANGED ACCORDING TO DISEASE AND SEX.

DISEASES (Short Classification).	STOBHILL.		EASTERN DISTRICT.		WESTERN DISTRICT.		SOUTHERN GENERAL.		TOTALS.		Per- centage of Total Average Hospital Cases dealt with. Re- sidence. Occupied.							
	Total.		F.		M.		F.		M.									
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.								
Acute Infectious Disease	46	46	92	1	5	6	7	4	11	14	3	17	68	58	126	45	19.8	25
Influenza	18	14	32	7	3	10	9	2	11	5	1	6	39	20	59	21	22.1	13
Tuberculosis, Respiratory	122	37	159	18	12	30	17	7	24	50	16	66	207	72	279	99	78.7	2.20
" Non-Respiratory	35	26	61	5	4	9	9	6	15	18	19	37	67	55	122	43	71.5	87
Malignant Disease	229	147	376	39	15	54	39	24	63	131	99	230	438	285	723	257	57.1	4.14
Rheumatism, Acute	51	91	142	25	24	49	17	20	37	33	40	73	126	175	301	1.07	68.6	2.07
" Muscular, etc.	50	45	95	32	16	48	13	9	22	42	29	71	137	99	236	84	33.2	7.79
" Chronic Arthritis	38	30	68	8	9	17	15	12	27	18	21	39	79	72	151	54	92.8	1.41
Veneral	16	15	31	3	—	3	2	1	3	10	7	17	31	23	54	19	46.3	25
Pregnancy and Diseases con- nected with Child Bearing	—		2,113	213	700	700	—	1,213	1,213	—	1,790	1,790	—	5,816	5,816	20.64	15.4	8.98
Congenital Debility and other Diseases of early infancy and malformations	86	60	146	31	10	41	29	13	42	18	9	27	164	92	256	91	30.4	78
Mental	194	326	520	73	65	138	3	—	3	190	126	316	460	517	977	346	92.8	9.09
Senile Decay	160	219	379	51	36	87	41	17	58	113	87	200	365	359	724	257	78.3	5.68
Violence	177	98	275	37	41	78	117	56	173	74	58	132	405	253	658	234	35.0	2.31
<i>Diseases not included in above—</i>																		
Nervous System	459	406	865	104	63	167	80	53	133	266	231	497	909	753	1,662	589	70.2	11.69
Respiratory System	512	335	847	243	129	372	272	125	397	311	176	487	1,338	765	2,103	746	37.3	7.87
Circulatory System	391	329	720	117	89	206	133	84	217	271	267	538	912	769	1,681	596	54.8	9.23
Digestive System	719	465	1,184	178	87	265	849	772	1,621	417	295	712	2,163	1,619	3,782	1343	17.4	6.59
Genito-Urinary System	155	363	518	75	127	202	66	69	135	103	207	310	399	766	1,165	413	34.5	4.03
Skin	389	299	688	—	2	2	1	1	2	81	106	187	471	408	879	312	58.3	5.13
Other Diseases	414	403	817	88	96	184	97	70	167	208	215	423	807	784	1,591	564	43.1	6.87
No Appreciable Disease	50	38	88	—	1	1	7	—	7	12	8	20	69	47	116	41	17.8	2.0
Born in Hospital	688	637	1,325	265	245	510	525	465	990	529	525	1,054	2,007	1,872	3,879	1376	12.6	4.91
Healthy Children	454	347	801	2	1	3	4	3	7	10	20	30	470	371	841	299	53.7	4.53
	5,453	6,889	12,342	1,402	1,780	3,182	2,352	3,026	5,378	2,924	4,355	7,279	12,131	16,050	28,181	100.00	35.41	100.00

TABLE II.—NUMBER OF DISMISSALS AND DEATHS IN THE CORPORAL

Diseases.	Not Stated.		-1		-3		-5		-16
	M.	F.	M	F.	M.	F.	M.	F.	M.
<i>Acute Infections—</i>									
Influenza, including influenzal pneumonia	—	—	—	—	—	—	1	—	3
Acute infectious diseases, including all notifiable diseases, together with measles, rubella, whooping-cough, mumps, but excluding pneumonia and puerperal fever, post-encephalitis lethargica and post-polio-myelitis, classified separately	—	—	10	8	20	14	6	4	14
Rheumatic fever, acute and sub-acute rheumatism (including chorea)	—	—	—	—	—	1	5	3	49
Other acute infections not requiring segregation	—	—	1	1	2	1	3	1	3
<i>Venereal Diseases—</i>									
Syphilis, gonorrhoea and soft sore, syphilis, including all tertiary manifestations of the disease, except aneurysm and cardiac disease. Syphilis of the central nervous system is also classified separately. Stricture classified under other diseases of the genito-urinary system	—	—	—	1	—	—	—	—	—
<i>Tuberculosis—</i>									
Pulmonary	3	—	5	1	5	1	2	3	6
Non-pulmonary	—	—	6	2	5	4	—	3	18
<i>Chronic Rheumatism—</i>									
Joints	—	—	—	—	—	—	—	—	—
Fibrous tissues, including muscular rheumatism, sciatica, and lumbago	—	—	—	—	—	—	—	—	2
<i>Metazoan Parasites</i>	—	—	—	—	—	—	—	—	2
<i>Other Parasitic Diseases—</i>									
Scabies, pediculosis, etc. ...	1	—	11	7	15	16	19	12	51
<i>Diseases of the Blood—</i>									
Constitutional, diathetic and general diseases, diseases of the ductless glands, deficiency diseases (not including rickets) ...	—	—	—	—	2	—	1	1	5
Malnutrition (deprivation) ...	—	—	—	—	—	—	—	—	—
<i>Malignant Disease of (cancer and sarcoma)—</i>									
Central nervous system ...	—	—	—	—	—	—	—	—	1
Respiratory system	—	—	—	—	—	—	—	—	—
Digestive system	—	—	—	—	—	—	—	—	—
Genito-urinary system	—	—	—	—	—	—	—	—	—
Female generative organs ...	—	—	—	—	—	—	—	—	—
Breast	—	—	—	—	—	—	—	—	—
Other organs	—	—	—	—	—	—	—	—	—
<i>Simple Tumours, Cysts, etc.</i> ...	—	—	2	1	—	—	1	—	2

GENERAL HOSPITALS DURING THE YEAR ENDED 31ST DECEMBER, 1933.

GROUPS.

-25		-45		-65		-75		+75		Total.		Grand Total.	Deaths.		Total.
M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		M.	F.	
4	4	16	6	11	6	2	—	2	—	39	20	59	5	2	7
3	4	7	16	5	4	2	—	1	—	68	58	126	2	3	5
8	32	38	47	14	17	2	1	—	—	126	175	301	2	2	4
2	2	7	1	1	—	—	—	—	—	19	11	30	1	1	2
3	4	10	11	15	4	2	2	1	—	31	23	54	2	2	4
26	13	63	24	77	20	16	3	4	—	207	72	279	84	18	102
11	13	13	9	14	4	—	1	—	—	67	55	122	23	24	47
7	6	18	14	39	31	12	16	3	3	79	72	151	2	9	11
4	9	44	38	64	41	20	8	3	3	137	99	236	—	—	—
—	1	1	5	—	1	1	—	—	—	4	7	11	—	—	—
20	25	18	12	12	4	2	5	—	2	149	133	282	—	—	—
11	14	23	69	55	102	31	52	9	7	137	246	383	21	31	52
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
1	3	9	1	6	2	—	—	—	—	17	8	25	10	4	14
—	—	10	4	40	3	11	2	3	—	64	9	73	39	6	45
1	1	19	9	113	50	106	40	27	18	266	118	384	160	78	238
1	—	2	1	24	2	19	1	4	1	50	5	55	27	4	31
—	1	—	17	—	47	—	12	—	4	—	81	81	—	36	36
—	—	—	4	—	21	—	11	—	3	—	39	39	—	25	25
2	—	4	7	20	9	12	5	3	4	41	25	66	23	10	33
—	—	2	—	1	5	2	—	—	—	10	7	17	—	—	—

TABLE II.—NUMBER OF DISMISSALS AND DEATHS IN THE CORPORAT
AG

Diseases.	Not Stated.		-1		-3		-5		-16	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
<i>Diseases of the Nervous System—</i>										
Syphilis, including G.P.I. and										
tabes	—	—	—	—	—	—	—	—	—	—
Cerebral haemorrhage, embolism										
and thrombosis	—	—	—	—	—	—	—	—	—	—
Epilepsy	—	—	—	—	2	1	—	3	6	—
So-called functional diseases of										
central nervous systems, e.g.,										
neurasthenia	—	—	—	—	—	—	—	—	—	—
Post-poliomyelitis anterior ...	—	—	—	—	—	—	—	—	—	—
Post-encephalitis lethargica ...	—	—	—	—	—	—	1	—	—	—
Insanity (all mental cases) ...	1	—	—	—	—	—	—	—	3	—
Idiocy, imbecility, feeble-mind-										
edness	—	—	2	—	1	1	4	3	10	—
Meningitis (not C.S.F. or tuber-										
cular meningitis)	—	—	3	—	—	—	—	1	1	—
Other diseases of central nervous										
system	—	—	1	—	—	1	1	—	2	—
Diseases of the peripheral ner-										
vous system	—	—	—	—	—	—	—	—	2	—
Diseases of the eye	—	—	2	4	2	5	1	1	8	—
Diseases of the throat and nose,										
excluding infection of or hyper-										
trophy of tonsils and adenoids	—	—	2	2	—	4	—	1	27	—
Diseases of the ear	—	—	11	5	9	8	5	8	58	—
<i>Diseases of the Circulatory System—</i>										
Valvular heart disease	—	—	—	—	2	—	—	2	30	—
Other heart disease	—	—	—	—	—	—	—	—	2	—
Arterio-sclerosis	—	—	—	—	—	—	—	—	—	—
Varicose veins and varicose ulcer-										
ation of legs	—	—	—	—	—	—	—	—	—	—
Other diseases	—	—	—	—	—	—	—	—	—	—
<i>Diseases of Respiratory System—</i>										
Pneumonia—acute	—	—	94	59	44	48	19	13	24	—
Bronchitis—acute	—	—	62	50	50	36	18	16	25	—
Chronic bronchitis, including										
asthma and other complica-										
tions	—	—	1	—	1	2	—	—	11	—
Other diseases	2	—	2	2	3	2	2	3	29	—
<i>Diseases of the Digestive System—</i>										
Hypertrophy of tonsils and										
adenoids	—	—	—	—	17	21	55	41	854	8
Acute tonsillitis or pharyngitis										
... ..	—	—	—	2	5	2	3	4	8	—
Gastritis	—	—	4	1	2	—	—	—	4	—
Gastric and duodenal ulcer ...	—	—	—	—	—	—	—	—	1	—
Appendicitis	1	—	—	—	—	—	1	—	35	—
Diarrhoea and enteritis	—	—	153	114	39	33	7	3	4	—
Caries and other diseases of teeth										
and gums (dental cases) ...	—	—	—	—	1	—	8	3	6	—
Hernia of abdominal viscera ...	—	—	23	2	13	—	2	—	6	—
Haemorrhoids	—	—	—	—	—	—	—	—	—	—
Other diseases	—	—	6	3	9	6	5	2	28	—
<i>Diseases of Genito-Urinary System—</i>										
Acute nephritis	—	—	—	—	1	1	3	4	8	—
Chronic nephritis	—	—	—	—	1	—	—	—	—	—
Prostatitis	—	—	—	—	—	—	—	—	—	—
Stricture	—	—	—	—	—	—	—	—	2	—
Diseases of the female generative										
organs	—	—	—	—	—	1	—	—	—	—
Other diseases of genito-urinary										
system	—	—	1	2	3	9	1	2	7	—

GENERAL HOSPITALS DURING THE YEAR ENDED 31ST DECEMBER, 1938—*Continued.*
COUPS.

	-25		-45		-65		-75		+75		Total.		Grand Total.	Deaths.		Total.
	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.		F.		
2	2	25	25	44	16	4	6	—	1	75	52	127	20	10	30	
—	—	7	18	120	98	117	92	48	38	292	246	538	170	157	327	
0	21	38	37	27	20	7	2	—	2	99	103	202	3	5	8	
2	14	28	21	10	18	2	4	—	—	42	58	100	—	—	—	
7	2	13	20	8	2	2	—	—	—	31	24	55	5	6	11	
0	60	175	210	139	154	22	23	4	5	394	456	850	22	29	51	
0	19	21	23	7	7	1	—	—	1	66	61	127	1	—	1	
—	1	2	1	2	—	1	—	—	—	9	3	12	5	1	6	
3	5	46	43	38	21	13	3	5	2	114	76	190	20	15	35	
3	2	13	6	15	10	1	5	—	—	34	24	58	—	1	1	
2	6	6	2	5	8	4	2	3	1	33	38	71	—	—	—	
7	3	18	7	9	8	2	1	—	1	65	42	107	—	1	1	
9	9	17	6	2	8	2	1	2	1	115	87	202	2	1	3	
4	35	57	102	89	90	56	32	11	14	259	304	563	86	76	162	
1	1	17	25	152	95	145	85	52	48	369	256	625	210	151	361	
—	1	2	4	70	38	94	55	34	39	200	137	337	85	63	148	
1	1	14	22	31	23	13	20	2	2	61	68	129	—	—	—	
—	—	—	2	15	1	8	—	—	—	23	4	27	10	1	11	
3	6	32	18	47	17	19	2	4	2	296	184	480	133	64	197	
5	5	26	16	24	15	5	4	2	2	213	162	375	17	5	22	
4	18	91	58	295	127	146	74	58	27	617	312	929	122	39	161	
9	25	60	25	60	21	24	7	3	3	212	107	319	24	8	32	
7	9	7	1	1	—	—	—	—	—	941	926	1,867	—	—	—	
3	14	29	12	4	2	1	—	—	—	63	50	113	—	1	1	
7	2	44	17	37	11	13	8	—	3	111	44	155	—	—	—	
4	—	115	8	68	11	4	2	—	—	205	21	226	14	2	16	
6	10	32	22	5	3	—	—	—	1	80	55	135	4	2	6	
1	3	15	5	9	8	1	3	3	1	232	174	406	85	51	136	
9	15	40	47	11	8	3	1	—	—	78	85	163	—	—	—	
2	1	34	11	40	4	17	7	1	1	138	27	165	3	3	6	
1	—	18	3	25	6	1	—	1	—	46	9	55	—	—	—	
5	18	82	53	76	72	33	36	11	10	265	221	486	28	30	58	
6	3	7	10	4	2	—	3	—	—	29	31	60	5	2	7	
4	3	19	16	37	21	13	5	4	1	78	48	126	45	25	70	
—	—	—	—	19	—	33	—	16	—	68	—	68	12	—	12	
2	—	4	—	13	—	7	—	2	—	28	—	28	4	—	4	
—	90	—	321	—	81	—	9	—	4	—	512	512	—	6	6	
3	24	64	69	64	29	27	16	16	7	196	175	371	24	9	33	

TABLE II.—NUMBER OF DISMISSALS AND DEATHS IN THE CORPORAT

Diseases.	Not Stated.		-1		-3		-5		-16	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
<i>Pregnancy—</i>										
Diseases peculiar to pregnancy and other diseases complicated by pregnancy—ante-natal only	—	—	—	—	—	—	—	—	—	—
<i>Parturition and Puerperium—</i>										
Diseases peculiar to pregnancy and other diseases complicated by pregnancy; Parturition in Hospital	—	—	—	—	—	—	—	—	—	—
Lying-in normal	—	—	—	—	—	—	—	—	—	—
Lying-in with puerperal complications	—	—	—	—	—	—	—	—	—	—
Lying-in with sepsis and pyrexia	—	—	—	—	—	—	—	—	—	—
Lying-in with other diseases	—	—	—	—	—	—	—	—	—	—
Abortion and miscarriage	—	—	—	—	—	—	—	—	—	—
Delivered outwith hospital	—	—	—	—	—	—	—	—	—	—
Born in hospital	—	—	2,007	1,872	—	—	—	—	—	—
Diseases of the skin	—	1	22	21	41	45	22	25	52	—
Inflammation of cellular tissue, including acute inflammation of lymphatic glands	—	—	25	15	31	33	14	9	59	—
Acquired deformities of bones, joints, etc.	—	—	—	—	—	—	—	1	3	—
Inflammation of bones, joints, and organs of locomotion, excluding tuberculosis and rheumatism ...	2	—	1	—	5	—	—	—	12	—
Diseases, injuries, and malformation of the newly-born	—	—	33	24	—	—	—	—	—	—
Congenital malformations and deformities (under 5 years)	—	—	34	13	18	5	4	2	—	—
Congenital malformations and deformities (over 5 years)	—	—	—	—	—	—	—	—	18	—
Diseases peculiar to infancy and childhood	—	—	52	34	13	8	6	2	4	—
Rickets and malnutrition	—	—	7	10	12	12	—	—	1	—
Accidents and injuries—fractures	—	—	1	2	5	1	6	2	19	—
Accidents and injuries—others	1	—	5	1	20	12	19	8	67	—
Poisoning	—	—	—	—	3	—	—	—	—	—
<i>Alcoholism—</i>										
Including acute alcoholism, alcoholic gastritis, delirium tremens, alcoholic cirrhosis, etc.	1	—	—	—	—	—	—	—	—	—
<i>Senility—</i>										
Old age, including senile dementia and senile gangrene ...	—	—	—	—	—	—	—	—	—	—
Debility following operations, childbirth and acute infections ...	—	—	—	—	—	—	—	—	—	—
Healthy Children	—	—	116	103	74	46	59	56	221	36
Diseases ill-defined or not specified	—	—	—	—	—	—	—	—	2	2
No appreciable disease	—	—	11	5	5	5	4	2	14	15
	12	1	2,716	2,367	481	385	308	244	1,829	131

GENERAL HOSPITALS DURING THE YEAR ENDED 31ST DECEMBER, 1933—*Continued.*
GROUPS.

No.	-25		-45		-65		-75		+75		Total		Grand Total.	Deaths.		Total.
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.		M.	F.	
—	307	—	461	—	3	—	—	—	—	—	—	772	772	—	10	10
—	112	—	262	—	4	—	—	—	—	—	—	379	379	—	8	8
—	1,233	—	1,592	—	3	—	—	—	—	—	—	2,832	2,832	—	—	—
—	254	—	371	—	2	—	—	—	—	—	—	627	627	—	12	12
—	44	—	41	—	—	—	—	—	—	—	—	85	85	—	—	—
—	18	—	49	—	—	—	—	—	—	—	—	67	67	—	5	5
—	213	—	742	—	12	—	—	—	—	—	—	967	967	—	8	8
—	31	—	56	—	—	—	—	—	—	—	—	87	87	—	4	4
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
41	34	73	32	52	37	13	13	6	4	322	275	1,872	3,879	124	71	195
26	97	60	120	47	30	22	9	5	8	289	353	642	7	9	16	16
2	5	16	4	9	2	5	—	—	2	35	16	51	—	—	—	—
4	3	9	5	15	5	2	2	1	—	61	21	82	8	4	12	12
—	—	—	—	—	—	—	—	—	—	33	24	57	30	20	50	50
—	—	—	—	—	—	—	—	—	—	56	20	76	4	10	14	14
—	—	2	—	—	—	—	—	—	—	20	—	20	—	—	—	—
—	—	—	—	—	—	—	—	—	—	75	48	123	31	17	48	48
—	—	—	—	—	—	—	—	—	—	20	26	46	—	2	2	2
6	6	27	13	58	26	34	34	20	25	176	120	296	8	11	19	19
7	10	34	14	40	31	18	18	10	12	221	131	352	7	6	13	13
1	—	1	1	3	1	—	—	—	—	8	2	10	1	—	1	1
1	1	57	11	95	30	18	9	—	2	172	53	225	7	3	10	10
—	—	—	—	27	19	151	130	187	210	365	359	724	178	166	344	344
—	2	2	9	2	—	—	—	—	—	4	11	15	—	—	—	—
—	—	—	—	—	—	—	—	—	—	470	371	841	—	—	—	—
3	7	22	20	13	11	—	—	—	—	40	40	80	—	—	—	—
5	7	14	9	15	3	1	1	—	—	69	47	116	—	—	—	—
21	2,944	1,839	5,393	2,509	1,647	1,345	883	571	525	12,131	16,050	28,181	1,965	1,386	3,351	3,351

TABLE III.—RETURN OF OPERATIONS PERFORMED IN GENERAL HOSPITALS FROM 1ST JANUARY TO 31ST DECEMBER, 1938.

	STOBHILL.			EASTERN DISTRICT.			WESTERN DISTRICT.			SOUTHERN GENERAL.			TOTALS.		
	No. of Operations.			No. of Operations.			No. of Operations.			No. of Operations.			No. of Operations.		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
1. Operations on Brain	—	29	—	—	—	—	—	—	—	—	—	—	—	29	—
2. Operations on Spinal Cord and Peripheral Nervous System	7	37	1	—	—	—	—	—	—	4	6	9	11	43	10
3. Operations on Thorax, other than Induction of Pneumothorax	—	7	1	1	—	—	2	6	—	4	4	—	7	17	1
4. Operations for Induction of Pneumothorax	—	8	—	—	—	—	—	—	—	—	—	—	—	8	—
5. Operations on Blood Vessels (excluding Varicose Veins and Haemorrhoids)	2	49	24	—	—	—	1	—	2	—	—	—	3	49	26
6. Operations for Varicose Veins	1	11	—	—	—	—	1	1	—	—	—	15	2	12	15
7. Operations for Haemorrhoids	22	—	—	5	—	—	2	—	1	12	—	3	41	—	4
8. Operations on Digestive System—Abdominal Section (excluding Appendicectomy)	95	13	—	23	1	—	15	4	—	75	2	—	208	20	—
9. Appendicectomy	23	—	—	20	—	—	34	—	—	44	—	—	121	—	—
10. Herniotomy	60	6	—	18	—	—	13	—	—	33	—	—	124	6	—
11. Other operations on Digestive System	20	—	—	—	—	—	—	—	—	27	4	37	47	4	37
12. Operations on Genito-Urinary System	103	25	47	28	35	—	23	10	9	117	17	49	271	87	105
13. Operations on Female Organs of Generation (<i>i.e.</i> , Gynaecological Operations)	225	—	16	76	—	—	39	1	—	55	1	—	395	2	16
14. Operations for Excision of Cancer of the Breast	3	—	—	1	—	—	—	—	—	2	—	—	6	—	—
15. Operations for Insertion of Radium in Malignant Disease	23	2	3	4	—	—	1	—	—	1	—	—	29	2	3
<i>Carried forward</i>	584	187	92	176	36	—	131	22	12	374	34	113	1,265	279	217

TABLE III.—RETURN OF OPERATIONS PERFORMED IN GENERAL HOSPITALS FROM 1ST JANUARY TO 31ST DECEMBER, 1938—Continued.

	STOBHILL.			EASTERN DISTRICT.			WESTERN DISTRICT.			SOUTHERN GENERAL.			TOTALS.		
	No. of Operations.			No. of Operations.			No. of Operations.			No. of Operations.			No. of Operations.		
	A	B	C	A	B	C	A	B	C	A	B	C	A	B	C
<i>Brought forward</i> ...	584	187	92	176	36	—	131	22	12	374	34	113	1,265	279	217
16. Operations on Bones, Joints, and Organs of Locomotion ...	114	11	92	12	—	—	24	—	—	128	6	108	278	17	200
17. Amputations of Arm, Hand, Leg, or Foot ...	14	—	—	1	—	—	—	—	—	13	—	—	28	—	—
18. Amputations of Fingers or Toes ...	2	—	—	—	—	—	3	1	—	—	—	—	5	1	—
19. Incisions for Acute Abscesses and Cellulitis ...	390	43	15	36	3	—	29	9	—	150	10	35	605	65	50
20. Operations on Skin, Subcutaneous Tissues, and Superficial Lymphatic Glands ...	84	38	8	—	—	—	18	9	—	26	21	37	128	68	45
21. Operations on Throat and Nose (excluding removal of Tonsils and Adenoids) ...	104	131	6	—	—	—	5	—	—	39	—	—	148	131	6
22. Operations for Removal of Tonsils and Adenoids ...	300	4	—	—	—	—	1,362	—	—	310	—	—	1,972	4	—
23. Operations on Eye ...	14	123	3	—	1	—	—	—	—	—	23	—	14	147	3
24. Operations on Ear ...	138	3	26	—	—	—	13	—	—	32	—	—	183	3	26
25. Operations on Teeth and Gums ...	360	707	—	58	—	—	66	—	—	122	1,485	—	606	2,192	—
26. Obstetric Operations ...	817	2	27	199	—	—	249	—	—	516	—	112	1,781	2	139
27. Diathermy ...	9	5	1	3	—	—	—	—	—	6	—	—	18	5	1
	2,930	1,254	270	485	40	—	1,900	41	12	1,716	1,579	405	7,031	2,914	687

A—With General or Spinal Anaesthetic.

B—With Local Anaesthetic.

C—Without Anaesthetic.

DIABETES—SUPPLY OF INSULIN.

Supplies of Insulin are given to persons whose circumstances warrant such assistance and who are not already provided for under the National Insurance Scheme or Public Assistance.

The following statement summarises the change in the Roll during 1938:—

Cases on the Roll at 31st December, 1937	...	...	224
Cases applying for the first time during 1938	...	74	
Cases who discontinued treatment prior to 31st December, 1937, but re-applied during 1938	...	16	
		—	90
			<hr/> 314
Cases who died during 1938	...	27	
Cases who discontinued supply during 1938	...	39	
		—	66
			<hr/> 248
Leaving cases on the Roll at 31st December, 1938	...		<hr/> <hr/> 248

Of the 74 cases applying for the first time during 1938, 63 were married women or widows; 8, while of insurable age, were outwith the National Insurance Scheme; and 3 were children under 16 years of age.

The 39 cases who discontinued treatment were visited and the following reasons were given for their discontinuance:—

Gone away, no address	...	...	...	...	8
Discontinued on medical advice	...	...	...	...	7
Discontinued of own accord	...	...	...	...	17
Obtaining supplies elsewhere (per P.A.D. or N.H.I.)	...	...	...	...	7
Removed to hospital	...	...	...	...	—
					<hr/> 39
					<hr/> <hr/>

Of the 248 cases on the Roll at 31st December, 1938, 23 are males and 225 females.

The daily dosage of these 248 cases is as follows:—

Daily Amount.					Number of Cases receiving		
					Ordinary Strength.	Double Strength.	Protamine Insulin.
Under 5 units	...	...	...	...	—	—	1
5 to 14 units	...	...	...	...	17	1	19
15 to 24 units	...	...	...	...	33	5	19
25 to 34 units	...	...	...	...	31	5	7
35 to 44 units	...	...	...	...	22	5	12
45 to 54 units	...	...	...	...	9	2	2
55 to 64 units	...	...	...	...	11	4	5
65 to 74 units	...	...	...	...	2	3	1
75 to 84 units	...	...	...	...	—	3	—
85+ ...	...	...	...	...	3	3	2
Not stated	...	...	...	...	9	7	5
					<hr/> 137	<hr/> 38	<hr/> 73
					<hr/> <hr/> 248		

The present age of the 248 cases on the Roll at the end of the year is as follows:—

Age.	No. of Cases.
1 to 10 years	1
11 to 20 years	24
21 to 30 years	4
31 to 40 years	13
41 to 50 years	29
51 to 60 years	81
61 to 70 years	71
71 to 80 years	18
80+ years	1
Not stated	6
	<hr/>
	248
	<hr/>

The preponderance of married women on the Roll (84 per cent. of the cases) is shown in the following table:—

Married women and widows—housewives	209
Unmarried women—at home	8
Uninsured males	15
School children	16
	<hr/>
	248
	<hr/>

During the year 21,053 phials of Insulin were issued. Of these, 13,640 were ordinary strength (100 units per 5 c.c.), 4,140 were double strength (200 units per 5 c.c.), and 57 were extra-double strength (400 units per 5 c.c.). Also included in this total were 285 phials of Protamine (Retard) and 2,931 Protamine (Zinc) Insulin. The cost was £781 3s. 5d., as compared with £715 7s. 7d. per 22,519 phials issued during 1937. This increase in cost, despite a reduction in the total amount issued, is due to the increased use of Protamine Insulin.

PART IV.

MENTAL SERVICES.

By Dr. Ronald Stewart.

The position in the mental hospitals belonging to the Corporation has continued to be difficult throughout the year owing to the shortage of accommodation.

Owing to unforeseen circumstances an extra heavy demand on the accommodation in the asylums was made by outside authorities who found it impossible to retain Glasgow patients in their institutions. Early in the year an urgent request was made for the removal of 65 patients from Riccarton Asylum, Paisley, and a large proportion of these patients was absorbed into the population of the Glasgow institutions by the month of May. A considerable number had also to be taken from Kirklands Asylum, Bothwell, owing to the threatened collapse of one of the buildings in that institution. As a result of this large influx of patients great difficulty was experienced in finding accommodation for patients from the observation wards of the general hospitals, and, in consequence, many patients had to be retained in these wards who would have been more suitably provided for in the mental hospitals. This is an unfortunate position as the presence in these wards of more or less chronic cases of insanity is detrimental to the treatment of the milder cases of incipient insanity and cases of nervous illness for whom the wards are primarily intended. A certain amount of relief may be looked for in the coming year when it is hoped that additional new accommodation at Woodilee will become available.

Admissions, Discharges and Deaths.—During the year 461 certified patients were admitted to the mental hospitals. Although this figure shows a considerable drop from the figure for the previous year it is still fairly high, but it is not unduly so when allowance is made for the fact that it includes 120 transferred from other asylums or certified institutions.

For various reasons it is impossible to form a true estimate from these figures as to the increase or decrease in the incidence of insanity occurring in the population. During the past five years the average number of admissions, excluding transfers from other institutions, has been 341, but, as has already been stated, more

cases would have been admitted from the observation wards had accommodation been available in the mental hospitals.

In recent years the trend of opinion has been towards the avoidance of certification wherever possible and the treatment on a voluntary basis of persons suffering from mental illness. This has been carried out under the existing statutory provisions in most of the mental hospitals throughout the country and particularly in the mental hospitals not administered by local authorities, in several of which actually more than 50 per cent. of the admissions are admitted as voluntary patients. So far as Glasgow Corporation institutions are concerned use has not been made of these provisions to any material extent for several reasons. One of these is that the large provision made in the observation wards of the general hospitals, where all patients are admitted on a voluntary basis and where skilled treatment is available for all forms of mild or incipient insanity, is considered sufficient in the meantime to meet the needs of the members of the community desiring treatment on a voluntary basis.

If the situation in the mental hospitals in respect of accommodation were to improve provision would be made for the admission on a voluntary basis and without certification of patients in need of and applying for such treatment.

During the year there were 3,557 patients under care in the four mental hospitals, an increase of seven over the number for the previous year. There were 3,177 cases on the register on 31st December, 1938, as compared with 3,096 on 31st December, 1937. The number of patients discharged recovered was 116, which shows a satisfactory increase over the figures for the previous year when the number was 64. The increase in the recovery rate was most marked at Hawkhead, and it is quite possible that this may be due, in part at least, to the fact that this institution is the only one of the Glasgow mental hospitals possessing a modern hospital division, equipped with the latest electrical and other therapeutic appliances. Provision on similar lines has been planned for Woodilee and Gartloch, and it is hoped that when these have been installed and are in use a corresponding improvement in their recovery rates may ensue.

There were 191 deaths during the year, an increase of 27 over the previous year and of 33 over 1936, in which year the death-rate was the lowest ever recorded.

Of those patients discharged recovered the great majority were discharged within one or two years of admission. Thus 57.75 per cent. were discharged within one year of admission; 21.55 per cent. after one year and within two years; 14.6 per cent. after two and within five years; and 6 per cent. after five years' residence. It is interesting to note that seven patients were discharged recovered during the year after a period of continuous treatment extending beyond five years. Fifty-six per cent. of the deaths occurred in patients who had been in residence for more than five years.

Types of Mental Disorder.—It is again noted that upwards of 55 per cent. of the admissions fall within the categories of schizophrenia (including paraphrenia) and senile psychoses, conditions for which the prognosis is generally far from hopeful. Senile decay, myocardial degeneration, broncho-pneumonia, and organic brain disease account for the largest proportion of the deaths.

The causative factors in the production of mental disorder are very difficult to determine with any degree of accuracy. Constitutional and environmental factors both play a large part, and the breakdown cannot be attributed to one or other with certainty. Mental stress, constitutional inferiority and endocrine disturbances consequent on the climacteric were all well recognised causative factors in many cases. Alcoholism is in many cases more in the nature of a symptom of loss of control than a cause of the breakdown.

Extensions of Mental Hospitals.—Good progress has been made with the building of the new hospital and sanatorium at Woodilee, and it is anticipated that these buildings which will provide 124 beds will be ready for occupancy in the autumn of 1939. The extension of the Nurses' Home at Woodilee is almost ready and will be occupied before the summer of 1939. This accommodation will provide an additional 112 bedrooms, each equipped with built-in wardrobes and hot and cold water.

At Gartloch, considerable progress has been made in the erection of the new Nurses' Home which will provide for the accommodation of 144 nurses. The erection of the new extension of 300 beds at Gartloch will shortly be commenced.

The proposed extension and Nurses' Home at Stoneyetts have not yet been commenced, but plans have been prepared and it is

expected that building operations will commence at an early date. Minor alterations have been carried out at the recreation hall at Stoneyetts which are greatly appreciated by the patients, the staff and visitors to the institution. The hall has been completely re-floored and re-decorated and dressing rooms provided for visiting artistes. Sanction has also been obtained for the provision of greenhouses to provide a supply of flowers and plants for use in the wards.

Patients in Other Institutions.—A considerable fall has taken place in the number of Glasgow patients boarded in institutions belonging to other authorities. Only 59 were admitted to these institutions, while 148 were discharged, most of them being transferred to Glasgow institutions, as already indicated. The decrease during the year amounted to 89 patients, and at 31st December, 1938, there remained 568 patients in outside institutions. A further decrease is to be anticipated during the coming year.

Admission of Lunatics from Prison.—The demand at the instance of the Procurator-Fiscal under Section 15 of the Act of 1862 for accommodation for dangerous lunatics has continued regularly throughout the year and 99 of these cases were admitted to the asylums. As certain restrictions are imposed in respect of the control of these patients it has been found difficult to treat them properly alongside other ordinary patients who naturally object to being treated along with criminal cases. In its evidence in connection with this point, submitted to the Committee appointed by the Secretary of State for Scotland to revise the Lunacy Laws applicable to Scotland, the Corporation recommends that this category of so-called dangerous lunatics should be abolished and that all the cases admitted to the asylums under Section 14, whether notified by the Procurator-Fiscal or not, should be treated as ordinary lunatics. It further recommends that all criminal lunatics and dangerous lunatics committed under Section 15 should be treated in a State institution administered by the Crown. This recommendation if carried out would ease considerably the administration of the mental hospitals where the restrictions imposed in connection with the treatment of the fiscal cases react detrimentally on many of these and also on the other patients.

Licensed Wards in Southern General Hospital.—These wards continue to be occupied to their full capacity by the more harmless

type of chronic patient. There are at present 389 beds available for this type of patient in the licensed wards. It has been necessary, owing to lack of beds elsewhere, to retain a number of bedridden patients as a temporary measure.

Research.—Research work in connection with the causation of mental disease continues to be prosecuted in all the mental institutions in collaboration with the Director of the West of Scotland Neuro-Psychiatric Research Institute.

Dental Services.—Since the dental services for the mental institutions were established on a full-time basis on 1st April, 1937, a complete overhaul of the teeth of the patients in these institutions has been made with marked improvement in the general health and well-being of the patients. Modern dental equipment has been installed in all the Mental Hospitals and Certified Institutions with the exception of Stoneyetts.

From 1st April to 31st December, 1937, the following treatments were carried out:—3,350 patients examined including 37 who refused treatment; 291 fillings; 3,116 extractions; 104 dressings; 21 root treatments; 265 sealings; 278 dentures supplied; 25 old dentures remade; 84 dentures repaired.

During the year 1938 the details were as follows:—4,237 patients examined including 66 who refused treatment; 6,315 extractions; 234 fillings; 31 dressings; 7 root treatments; 203 sealings; 366 dentures supplied; 19 old dentures remade; 140 dentures repaired.

Certified Institutions for Mental Defectives.—The number of patients in Lennox Castle Certified Institution at the close of the year was 1,108, an increase of 120 compared with the previous year. The number is now approaching the complement for which the institution was designed and it is anticipated that in the comparatively near future it will be fully occupied. The majority of the admissions were from the two large general hospitals and the Royal Scottish National Institute, Larbert, from the latter of which 31 patients were transferred.

There is no institutional accommodation available in Glasgow for mental defectives of the educable type under 16 years of age, and great difficulty has been experienced in finding accommodation for even a few of the juvenile delinquent defectives who have come

before the courts charged with some offence and who have been recommended for admission to a certified institution. The provision of institutional accommodation for these defectives is at present under consideration by the appropriate committee of the Corporation.

At Caldwell House early in the year the Boys' Home which had been occupied by the aged blind for many months was vacated by the transfer of the blind to Cairnhill Mansion House, Airdrie. The home was then utilised as a hospital for the treatment of low grade and helpless children, and this arrangement has proved of great value and has added to the comfort of both patients and staff. Full use is now being made of the whole institution and great credit is due to the Matron and her staff for many improvements that have been effected. Classes in simple handicrafts, in singing and drill have been instituted for children above the lowest grades with marked improvement in their general appearance and conduct. There were 99 patients of the ineducable juvenile defective type in residence at the close of the year. Requests continue to be received from time to time for the admission of cases.

MENTAL OBSERVATION WARDS.

There has been a further increase in the number of patients admitted to the observation wards of the general hospitals during the year, 1,718 compared with 1,698 for the previous year. The total number under treatment was 2,140, a figure slightly less than that for the previous year. This is accountable for by the fact that suitable accommodation elsewhere is not available at present for many of the patients suffering from incurable insanity or senile dementia who still continue to occupy valuable beds in the observation wards. In spite of this handicap, however, the wards continue to justify their position as a useful and important part of the services for dealing with mental ill-health in the City.

Of the 2,140 cases treated during the year, 1,149 (53.7 per cent.) were sufficiently recovered to be discharged to their homes or, where they had no homes, to a Public Assistance institution; 282 patients (13.17 per cent.) died, the majority of whom were old people or those admitted in states of delirium from causes other than mental disease. There were 281 patients (13.13 per cent.) certified and transferred to mental hospitals for further treatment.

The excellent facilities available in the hospitals for the investigation and treatment of each individual case continue to be utilised to the full, and the Radiological Department, the Biochemical Department, the Massage and Electro-therapy Department and the other special departments are frequently called upon to help in the elucidation and treatment of cases in the observation wards.

The use of Cardiazol in the treatment of cases of schizophrenia and other conditions affecting the younger patients has been continued with varying results which have on the whole been satisfactory and which fully justify its use in cases of this age group.

In one of the hospitals the services of a nurse who visits the homes of patients and acts in the capacity of a social investigator have been utilised and have proved extremely helpful not only in elucidating the causes of the breakdown in many cases but also in helping the patient and his relatives to adjust satisfactorily as far as possible the difficulties of the home environmental conditions, which so frequently lie at the root of cases of mental breakdown. The extension of such a service in connection with the other observation wards and the psychiatric clinic is highly desirable and would almost certainly more than justify any expense involved.

Psychiatric Clinic.—It has not been found possible yet to extend the scope of this clinic which is held at 20 Cochrane Street on two days each week, but it still continues to prove of considerable service to many patients whose illnesses do not necessitate indoor treatment in hospital. It also helps to supply a useful service in respect of after-care to many patients who report progress for some time after discharge from the observation wards. Greater use is being made of the clinic by District Medical Officers, Probation Officers and others who refer cases presenting difficulties for the opinion and advice of the psychiatrists. Another useful function of the clinic is to supply advice to relatives on how to handle patients after their discharge from hospital. Frequently a wife comes to the clinic for advice about her husband while he is still a patient in hospital and after receiving advice may be willing to take him home again, whereas without such advice and help she might well be afraid to do so and adopt an attitude of suspicion and antagonism which might easily precipitate a recurrence of the failure of adaptation for which the husband was originally admitted to hospital.

During the year, in spite of the fact that one of the two psychiatrists was absent from duty on account of illness for two months, the number of patients who visited the clinic for the first interview was 136. The number of subsequent visits made by patients for further treatment was over 700, while 52 visits were made by relatives requesting advice.

Child guidance clinics have not been developed by this Department but a close liaison is maintained with the Notre Dame Child Guidance Clinic and the two child guidance clinics provided by the Education Committee.

SOUTHERN GENERAL HOSPITAL.

Dr. A. D. Briggs, Medical Superintendent, Southern General Hospital, reports as follows:—

The Observation Wards have been fully occupied during the past year, and the admission and discharge rates have been much on the same level as the previous year. The proportion of chronic psychotics and those suffering from some form of senile deterioration occupying beds in these wards is too high, and it is to be hoped that beds in other institutions more suitable for such cases will soon be available. These patients require careful and experienced nursing, and absorb too much of the Nursing Staff's time. Some of that time could be more profitably applied to the care and treatment of the acute and recoverable cases, which after all is the main function of these wards.

It is now fully recognised that no large General Hospital is complete without Psychiatric Wards. An Out-door Clinic, if possible, should be run in connection with those wards. The out-door Clinic at this Hospital was opened last June, and up to the end of the year 273 patients attended. The Clinic is held once weekly, but this is not sufficient to cope with the number of patients attending. If this unit of the Hospital (wards and clinic) is to function properly and up to modern standards the question of the medical staffing will require to be considered. A bath for hydro-therapy, it is anticipated, will soon be provided. In addition to the facilities for recreation, reading, etc., already provided, it is hoped to commence some form of Occupational Therapy, such as rug making, in the Male Wards at an early date. This will benefit the more chronic type of patient, or those requiring a long convalescence.

Research into the various forms of special treatment is being pursued. The Convulsion Treatment mentioned in last year's report has been continued, and is meeting with encouraging results. Two papers recording our experiences of this treatment have been published, and our results were recorded in the Annual Report of The West of Scotland Neuro-Psychiatric Research Institute. It has been fully recognised that this unit of the Hospital could not have functioned so well without the help and co-operation of the trained and experienced Home Visitor.

I would direct your attention to the Female Wards, excellent as wards, but their close proximity to the Licensed Wards is to be regretted. Facilities for treatment here are inadequate. Two additional side-rooms, one for examination and consulting, and one for special treatment are required.

I am still of the opinion that the word "Observation" does not properly indicate the function of these Wards. It is my experience that many patients and others regard the Observation Wards with some suspicion, and think that they still serve their original purpose—a sorting out place or rest house for the Mental Hospital.

REPORT ON THE STOBHILL MENTAL OBSERVATION WARDS FOR 1938.

By Dr. I. M. Sclare.

Since their inception, the Mental Observation Wards have filled a valuable place in the Mental Health Services. Over a long period of years the evidence of excellent results in the treatment of mild and transitory mental disorders, particularly in those accompanied by bodily disease, is now overwhelming.

The paramount advantage of the Observation Wards is their situation within the General Hospital. It is, therefore, a pleasure to be able to record that constant augmentation of the facilities of Stobhill Hospital for the investigation and treatment of illness is taking place, and that this is being reflected in a greater efficiency of service for the patients.

(1) *Convulsive Therapy*.—The most striking feature of this year's working has been the introduction of Cardiazol therapy. It is too early to assess its true value, but there seems little doubt that

in Cardiazol an advance of outstanding importance has been made. Since commencing this treatment, experience of it enables me to say that both on academic and practical grounds, Cardiazol treatment should be more extensively employed. Not the least of the many advantages of this course would be its stimulating moral effect in the wards. With the daily pursuit of such an active scheme of treatment, attended, as it usually is, with obvious benefits, a new hope and encouragement would be brought to patients.

It must be remembered that many Observation Ward patients are admitted within a reasonable time after the onset of their disorder, and that in the great majority of cases, the mental illness from which they suffer manifests itself by a condition of pathological introversion. Now, whatever be the true causal factors responsible for the production of this psychopathic state, one thing is self-evident, namely, that, mentally and physically, the organism as a whole is adopting a sluggish reaction to the demands of the environment. This is exactly where the great merit of convulsive therapy comes in, for Cardiazol acts as a cataclysmic stimulant to every body cell, not only to the neurone but to the secretory cell of all glandular structures. And the more recent the onset of sluggishness, the more likelihood is there of a favourable response to such stimulation. Looked at in this light, we see at once that the whole question of Cardiazol therapy is invested with a scope and importance far transcending Meduna's original ideas. Personally, I find it is providing me with an ever-increasing range of usefulness. I agree strongly, however, with Professor Meduna that the mere routine administration of the injection, as if it were a specific remedy, is not sufficient; the patient must receive appropriate individual psychotherapy during, before and after the injection treatment. Only in this way can the maximum benefit of Cardiazol be achieved.

(2) *Clinical Research*.—Clinical investigation into the relation of hypoadrenalism to mental disorder is proceeding and it may be possible shortly to publish a report. Apart from this investigation, there are several important subjects of clinical research which might profitably be undertaken, but lack of medical staff does not make this additional work possible at present.

(3) *Psychotherapy*.—Among the many sufferers from psychogenic mental disorders admitted this year (which form the majority of

the patients), it was possible to employ more comprehensive psychotherapy than hitherto. Suitable patients were selected, and their recovery was thus greatly facilitated. All such patients are, of course, afterwards kept in touch with, so far as is possible.

Since the British Medical Association are at present interested in this subject, a word may be in place here regarding the nature of the psychological methods of treatment. In these wards, the procedure of deep psychological analysis are never employed; lack of time and of specially skilled medical staff preclude this. Explanation, suggestion, and persuasion, all however embodying the clinical application of the concepts of psychopathology, are freely used. When it is illuminated by an understanding of mental pathology, psychotherapy is an extremely valuable procedure. No matter what bodily illness an Observation Ward patient suffers from, his mental health also requires attention. I look forward to the day when skilled psychotherapists will find a whole-time place on our medical staff. I am confident that such appointments would pay for themselves over and over again.

(4) *Psychoneuroses*.—I have considerably improved my experience of the psychoneuroses during the year. The application of the concepts of mental pathology to these physical and anxiety states is of the greatest practical value. Patients suffering from psychoneuroses are often put down as “unfit” and given symptomatic drug treatment. Most middle-aged patients are too mentally fixed to derive substantial benefit from treatment, especially as the environment offers them little incentive to recover. But it is quite different with the younger patient. No young patient who suffers from psychological illness should be deprived of the opportunity of making a recovery as an outdoor patient by psychological treatment. Considerable success has been achieved among such sufferers; and even among the chronic, it has been possible to bring about a cessation of drug therapy. This department of medicine is in need of organisation and building up. Medical students ought to be given an introduction to its working; so, also should the Outdoor Medical Service be made fully conscious of its due place in the scheme of Public Health Services.

(5) *Patients Admitted*.—During 1938 the number of patients admitted to the Observation Wards was 893, of whom 394 were males and 499 were females.

The classification of the nature of their mental disorders was as follows:—

						Males	Females
Manic-Depressive Psychosis	...	...	...	...	...	89	123
Schizophrenia	...	...	...	...	...	53	72
Senile Dementia	...	...	...	...	...	47	96
Alcoholism	...	...	...	...	...	56	26
Syphilitic Psychoses	...	...	...	...	...	33	15
Toxic Psychoses	...	...	...	...	...	34	21
Delusional States	...	...	...	...	...	24	29
Attempted Suicide	...	...	...	...	...	8	2
Paranoia	...	...	...	...	...	1	1
Confusional States	...	...	...	...	...	8	17
Drug Addiction	...	...	...	...	...	2	—
Mental Deficiency	...	...	...	...	...	11	29
Epilepsy	...	...	...	...	...	21	18
Puerperal Insanity	...	...	...	...	...	—	19
Insanity of Pregnancy	...	...	...	...	...	—	2
Menopausal Psychoses	...	...	...	...	...	—	10
Psychoneuroses	...	...	...	...	...	5	17
Loss of Memory	...	...	...	...	...	2	2
						<u>394</u>	<u>499</u>

TABLE "A"
MENTAL OBSERVATION WARDS.

	Stobhill.			Eastern District.			Southern General Hospital.			Total.	
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.
Remaining at 31st December, 1937	...	...	...	...	...	...	...	...	...	...	...
Admitted during 1938	...	...	...	...	...	...	...	...	...	...	...
Number treated during 1938	...	...	...	...	...	...	...	...	...	...	...
Number discharged home or transferred to Poorhouse during 1938	...	...	...	...	...	...	...	...	...	...	...
Number died during 1938	...	...	...	...	...	...	...	...	...	...	...
Number removed to Asylum	...	...	...	...	...	...	...	...	...	...	...
Number remaining as at 31st December, 1938	...	...	...	...	...	...	...	...	...	...	...
	121	120	241	30	29	59	99	29	128	250	178
	428	428	856	428	428	856	428	428	856	428	428

TABLE I.

ADMISSIONS, DISCHARGES AND DEATHS IN THE MENTAL HOSPITALS DURING 1938.

	Gartloch.			Woodilee.			Hawkhead.			Stoneyetts.			Totals.		
	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.	M.	F.	Total.
On Register at 31st December, 1937	481	400	881	579	484	1,063	573	447	1,020	74	58	132	1,707	1,389	3,096
Number of cases admitted during the year	51	30	81	38	35	73	102	98	200	47	60	107	238	223	461
Total cases under care during the year	532	430	962	617	519	1,136	675	545	1,220	121	118	239	1,945	1,612	3,557
Cases discharged and died during the year—															
Recovered	9	9	18	2	6	8	46	32	78	6	6	12	63	53	116
Not recovered	9	3	12	10	5	15	6	1	7	3	1	4	28	10	38
Died	26	17	43	24	29	53	40	38	78	7	10	17	97	94	191
Transferred to other Institutions in Scotland, and boarded-out in private dwellings	2	6	8	5	4	9	9	4	13	4	1	5	20	15	35
Total cases discharged and died during the year	46	35	81	41	44	85	101	75	176	20	18	38	208	172	380
Total cases on Register at 31st December, 1938	486	395	881	576	475	1,051	574	470	1,044	101	100	201	1,737	1,440	3,177

The Mental Hospitals at Woodilee, Gartloch, Hawkhead, and Stoneyetts have continued to fulfil their functions throughout the year in spite of difficulties connected with overcrowding in the wards for acute cases, and in the following tables will be found the details:—

TABLE II.
LENGTH OF RESIDENCE IN MENTAL HOSPITALS OF CASES DISCHARGED RECOVERED, AND OF CASES WHO DIED DURING 1938.

Length of Residence.	Gartloch.						Woodilee.						Hawkhead.						Stoneyetts.						Totals.					
	Re-covered.			Died.			Re-covered.			Died.			Re-covered.			Died.			Re-covered.			Died.			Re-covered.			Died.		
	M.	F.	F.	M.	F.	F.	M.	F.	F.	M.	F.	F.	M.	F.	F.	M.	F.	F.	M.	F.	F.	M.	F.	F.	M.	F.	F.			
Under 1 month	—	—	—	—	—	—	2	—	—	3	3	—	—	—	—	—	—	—	—	—	—	—	—	3	6		
1 to 3 months	1	—	—	—	—	1	2	4	3	1	4	1	—	—	1	2	6	3	4	8	—	—	—	—	—		
3 to 6 months	5	—	—	—	—	2	—	—	13	6	—	1	3	4	2	—	21	12	2	1	—	—	—	—			
6 to 9 months	—	3	—	—	—	1	—	—	5	5	1	2	—	1	2	2	5	10	3	4	—	—	—	—			
9 to 12 months	—	—	2	—	1	—	—	—	3	5	—	2	1	—	2	2	5	5	4	4	—	—	—	—			
1 to 2 years	1	3	1	—	—	1	1	—	12	6	4	2	1	1	—	3	14	11	6	5	—	—	—	—			
2 to 5 years	2	2	5	5	—	2	—	—	5	5	7	12	—	—	—	—	7	10	12	22	—	—	—	—			
Over 5 years	—	1	17	12	1	—	22	20	4	1	24	12	—	—	—	—	5	2	63	44	—	—	—	—			
Totals	9	9	26	17	2	6	24	29	46	32	40	38	6	6	7	10	63	53	97	94	—	—	—	—			

TABLE IV.

CAUSES OF DEATH AT AGE PERIODS, IN MENTAL HOSPITALS DURING 1938.
AGE DISTRIBUTION.

	Males.										Females.										Grand Total.
	—20					+70					—20					+70					
	—20	—30	—40	—50	—60	—70	—	—	—	—	—20	—30	—40	—50	—60	—70	—	—	—	—	
<i>Nervous System—</i>																					
General Paralysis of the Insane ...	—	—	2	3	5	1	—	—	—	11	—	—	2	1	2	1	—	—	—	6	17
Exhaustion following prolonged Mental Excitement	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	1	1
Epilepsy ...	—	1	1	—	1	1	—	—	—	4	—	—	—	—	—	—	—	—	—	—	4
Post-Encephalitis Lethargica	—	—	—	—	—	3	2	—	—	—	—	1	—	—	—	—	—	—	—	2	2
Organic Brain Disease	—	—	—	1	—	—	—	—	—	6	—	—	—	—	—	1	2	—	—	3	9
Melancholia ...	—	—	—	1	2	1	—	—	—	4	—	—	—	—	—	—	—	—	—	—	4
Paralysis Agitans ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	1
Acute Confusional Psychosis	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	1
Cerebral Tumor ...	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	1	1
<i>Diseases of the Circulatory System—</i>																					
Myocardial Degeneration ...	—	—	1	2	2	4	1	8	—	18	—	—	1	—	2	2	2	—	—	7	25
Fatty Degeneration of Heart	—	—	1	—	—	—	—	—	—	1	—	—	1	—	2	1	—	—	—	4	5
Cardiac Failure ...	—	—	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	1
Cerebral Haemorrhage	—	—	—	—	1	—	1	1	—	2	—	—	1	—	—	1	2	—	—	3	5
Cerebral Thrombosis	—	—	—	—	—	1	2	1	—	1	—	—	—	1	—	—	2	—	—	4	5
Coronary Thrombosis	—	—	—	—	1	—	1	2	—	4	—	—	—	—	—	—	—	—	—	—	4
Arterio-Sclerosis ...	—	—	—	—	—	—	1	1	—	3	—	—	—	—	1	3	3	—	—	7	10
Acute Cardiac Dilatation	—	—	1	—	—	1	—	—	—	2	—	—	—	—	—	—	—	—	—	—	2
Varicose Ulceration of Leg	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	1	1
Chronic Endocarditis	—	—	—	—	1	—	—	—	—	1	—	—	—	1	1	—	—	—	—	2	3
Angina Pectoris ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	1	1
<i>Diseases of the Respiratory System—</i>																					
Pulmonary Tuberculosis ...	—	—	1	3	1	—	—	—	—	5	—	1	1	—	—	—	—	—	—	2	7
Acute Lobar Pneumonia	—	—	—	1	—	—	—	—	—	1	—	—	—	—	—	—	—	—	—	—	1
Broncho Pneumonia	—	2	1	—	2	3	—	3	—	11	—	1	2	1	—	2	1	—	—	7	18
Hypostatic Pneumonia	—	—	1	—	—	1	1	1	—	3	—	—	—	—	1	1	1	—	—	2	5
Chronic Bronchitis ...	—	—	—	—	—	—	—	—	—	2	—	—	—	—	—	1	—	—	—	1	3
Acute Pulmonary Oedema	—	—	1	1	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	1	1
Pulmonary Neoplasm	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—	1
Pulmonary Embolism	—	—	—	—	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	—	1
Pulmonary Emphysema ...	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	1

TABLE V.

PROBABLE CAUSES OF INSANITY IN PATIENTS ADMITTED TO
MENTAL HOSPITALS DURING 1938.

Etiological Factors.	Males.	Females.	Total.
1. Mental Stress	30	42	72
2. Adolescence	19	4	23
3. Pregnancy	—	1	1
4. Puerperium	—	6	6
5. Climacteric	6	26	32
6. Senility	5	16	21
7. Bodily Ill-health and Exhaustion	6	8	14
8. Alcoholism	38	5	43
9. Syphilis	13	13	26
10. Constitutional Inferiority ...	17	18	35
11. Organic Brain Disease	3	9	12
12. Epilepsy	18	10	28
13. Disorders of Ductless Glands ...	—	4	4
14. War Strain	9	—	9
15. Congenital	14	8	22
16. Encephalitis Lethargica	2	3	5
17. Injury	4	3	7
18. Previous Attack	27	15	42
19. Huntington's Chorea	—	—	—
20. Acute Infective Illness	4	6	10
21. Deprivation of Special Senses	—	—	—
22. Unascertained	23	26	49
	<u>238</u>	<u>223</u>	<u>461</u>

In connection with this table, it should be borne in mind that in the causation of every mental illness there are many factors, each and all of which may have a distinct influence in precipitating the mental disorder. Such factors as personality, domestic and economic conditions, state of bodily health, and many others must be considered when assessing the probable cause of the condition. In this table the cause assigned in each case, although merely one of many factors, has been adjusted to have had an important bearing on the development of the illness.

Under the heading "Mental Stress" are included such conditions as domestic or business worries, adverse circumstances, etc., while under "Bodily Ill-health" are included malaria, influenza, gastric troubles, rheumatism, and the like.

TABLE VI.

SHOWING NUMBERS ADMITTED TO GLASGOW MENTAL HOSPITALS AND THE CHANNELS THROUGH WHICH THEY WERE ADMITTED DURING THE YEARS 1936-1938.

	Gartloch.			Hawkhead.			Woodilee.			Stoneyetts.		
	1936.	1937.	1938.	1936.	1937.	1938.	1936.	1937.	1938.	1937.	1938.	
Observation Wards	M. F. T. 15 26 41	M. F. T. 6 22 28	M. F. T. 11 15 26	M. F. T. 45 83 89	M. F. T. 172 18 64	M. F. T. 82 18 64	M. F. T. 39 60 6	M. F. T. 25 7 6	M. F. T. 32 15 7	M. F. T. 22 7 22	M. F. T. 51 77 77	
Home, Police Stations, Infirmary &c. ...	4 8 12	4 1 5	2 6 8	11 13 24	11 9 20	10 14 24	7 5 12	2 4 6	2 4 6	— — —	— — —	
Transferred from other Asylums or Certi- fied Institutions ...	4 2 6	11 4 15	11 6 17	2 6 8	10 12 22	41 11 52	2 3 5	9 13 22	6 3 9	60 55 115	20 9 29	
H.M. Prisons ...	12 5 17	28 3 31	27 3 30	22 1 23	35 5 40	33 9 42	13 2 15	31 4 35	23 3 26	1 — 1	1 — 1	
Totals ...	35 41 76	49 30 79	51 30 81	51 49 100	139 115 254	102 98 200	43 49 92	48 40 88	38 35 73	76 62 138	47 60 107	
H.M. Prisons ...	1931. 11	1932. 11	1933. 14	1934. 43	1935. 60	1936. 55	1937. 107	1938. 99				

GARTLOCH MENTAL HOSPITAL, GARTCOSH.

The average daily number of patients on the Register for the year 1938 was 874.9 (479.2 males and 395.7 females), a reduction of 5.4 compared with the previous year. The number on the Register on the 31st December, 1938, was 881, consisting of 486 males and 395 females. Fifty-one male patients and 30 females were admitted during the year. Twenty-two of the males and 3 of the females were admitted as Fiscal Cases, and 4 of the males were received on Prison Warrants. There were 43 deaths (26 males and 17 females) during the year, the total number being the same as in 1937, but with a variation in the proportion of males and females. The percentage of deaths on the average daily number was 4.9.

The health of the community was good during the year, except for a mild epidemic of Sonne dysentery in the Spring months. Cases occurred in three male hospital wards, but most of the cases occurred in the female hospital ward in which seniles are located. The infection would appear to have been imported from Glasgow, either by newly admitted patients or by visitors, as cases were reported in the City at the time. The malady was comparatively mild, the acute symptoms subsiding in the course of a few days. There were several cases of influenza in the early winter, but the disease never assumed epidemic form. Full advantage was again taken of the facilities for specialist advice and treatment, and the use of the modern "X" ray installation afforded by Stobhill Hospital.

Staff.—In March, 1938, Dr. William Mallinson, Senior Resident Medical Officer, resigned on his appointment as a school medical officer under the Corporation of Glasgow. Dr. Robert A. Murphy, who succeeded Dr. Mallinson, left in October to take up private practice in England. Dr. Norman A. Freebairn, who was appointed Junior Resident Medical Officer in March, and was promoted to the Senior Resident's post in October, resigned at the end of the year on his appointment as Surgeon Lieutenant in the Royal Navy. Dr. William Mullen, who had previously acted as clinical clerk in Lennox Castle Institution, was appointed Junior Resident Medical Officer in October, and Dr. Thomas Traill Ferguson, Junior Resident Medical Officer in Woodilee Mental Hospital, was promoted to the

office of Senior Resident in this institution. The average period of tenancy of their appointments in the cases of the last five resident medical officers was only fifteen months, despite the fact that three of them were promoted to the post of Senior Resident, and that ample opportunities are afforded for research in association with a central laboratory.

Reference was made in last year's report to the difficulty in obtaining suitable candidates for the female nursing and domestic staffs. The problem became even more acute in the year under review, despite the good conditions and generous off duty time. It will be noted in the subjoined table that 60 members of the female nursing staff left during the period of probationary service.

NUMBERS OF MALE AND FEMALE NURSES WHO LEFT THE SERVICE DURING THE YEARS ENDING
DECEMBER 1936, 1937 AND 1938.

Cause of Leaving—	1936.						1937.						1938.					
	Pro- bationary.			Estab- lished.			Pro- bationary.			Estab- lished.			Pro- bationary.			Estab- lished.		
	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.
Resignation ...	—	7	7	—	13	13	—	24	24	1	12	13	—	42	42	2	12	14
To be married ...	—	—	—	—	6	6	—	—	—	—	9	9	—	—	—	—	6	6
Expiry of temporary or probationary service	—	7	7	—	—	—	9	—	9	—	—	—	7	2	9	—	—	—
Ill-health ...	—	3	3	—	2	2	—	1	1	—	1	1	—	2	2	—	—	—
Left without notice	—	—	—	—	—	—	1	2	3	—	1	1	—	—	—	—	—	—
Dismissed	—	—	—	—	—	—	—	1	1	—	—	—	—	3	3	—	2	2
Died ...	—	—	—	—	—	—	—	—	—	1	—	1	—	1	1	—	—	—
On Superannuation Allowance	—	—	—	1	—	1	—	—	—	1	—	1	—	—	—	—	—	—
Given notice ...	—	—	—	—	—	—	—	3	3	—	—	—	—	3	3	—	—	—
Total	—	17	17	1	21	22	10	31	41	3	23	26	7	53	60	2	20	22

Examinations.—During the year 21 nurses (5 male and 16 female) passed the Preliminary examination, and 10 nurses (3 male and 7 female) the Final examination of the Royal Medico-Psychological Association.

Entertainments.—Parties of patients visited the Kelvin Hall Carnival and the pantomimes at the Royal and Princess's theatres. During the summer months the usual excursions by motor bus took place. The cinema continues to be a source of universal enjoyment.

Works Department.—The reconditioning of the lavatories of the four wards in the Male Asylum Block has now been completed. The existing cinema projection house has been condemned, and is to be replaced by a new building, containing projection and winding rooms, to be erected at the east end of the Recreation Hall. This will permit of projection along the long diameter of the hall, instead of across the short diameter as at present. The new arrangement will permit of a considerable increase in the seating accommodation, which will be necessary in view of the projected construction of a new hospital of 300 beds. Much of the laundry machinery and equipment is now antiquated, and the provision of new machinery and an alteration in the lay-out is at present under the consideration of the Public Health Department.

New Nurses' Home.—By the end of the year the building of the walls and roof of the new Nurses' Home had been largely completed, despite the holding up of the work by the severe winter and the very heavy rainfall in the autumn months (14 in. in two months).

A. M. DRYDEN,

Medical Superintendent.

HAWKHEAD MENTAL HOSPITAL.

Admissions, Recoveries and Deaths.—The number of patients on the Register at 31st December, 1937, was 1,020 (573 males and 447 females). During the year 200 patients were admitted, of whom 102 were males and 98 females; 3 males and 11 females were readmissions.

The average daily number resident during the year was 561.5 males, and 450.1 females; a total of 1011.6. The number of patients

discharged recovered was 78, consisting of 46 males and 32 females. The percentage of recoveries calculated on the number of admissions was 39.0 per cent. Taking into account the fact that comparatively few of our patients are received directly from their own homes in the early stages of their maladies, the majority already having received treatment in other Institutions, this can be regarded as a very satisfactory result. The total number of deaths was 78 (40 males and 38 females), representing a percentage of 7.7 of the daily average number of patients resident during the year.

General Paralysis of the Insane.—It is worthy of note that during recent years the number of patients suffering from this malady has shown a tendency towards steady decrease. It is remarkable, however, that whilst only 4 males were admitted there were 7 female patients admitted during the year. For the production of high fever, which has been found to be of immense value in the treatment of this malady, we have recently used electrical methods in place of infection by malaria. The results are promising but it is yet too early to give a definite pronouncement. Two General Paralytics were discharged recovered after having undergone treatment by induced hyper-pyrexia.

Service Patients.—On 31st December, 1937, there were 38 Service Patients, whose maintenance charge is met by the Ministry of Pensions, and 4 Ex-Service Patients, whose maintenance is paid by the General Board of Control, one of whom died, leaving 3 Ex-Service Patients on the Register at 31st December, 1938. During the year, 1 patient was transferred from the ordinary list to the service list, and 1 Service patient died, leaving on the Register at 31st December, 1938, 38 Service patients.

Staff.—The changes amongst the Staff during the year were as follows:—

					Males.	Females.
Engaged	...	...	...	...	39	114
Resigned voluntarily	...	...	...	...	22	65
Ill-health	...	...	...	...	1	6
Left without notice	...	...	...	...	0	25
Inefficient or unsuitable	...	...	...	...	4	4
Services no longer required	...	...	...	...	5	1
Dismissed	...	...	...	...	3	7
Died	...	...	...	...	1	0

Nursing Certificates.—During the year, 4 male nurses and 9 female nurses passed the Final examination and gained the certificate in mental nursing of the Royal Medico-Psychological Association, and 29 male and 20 female nurses passed the Preliminary examination. One male and 1 female nurse passed the Final examination of the General Nursing Council of Scotland. One male nurse passed the Preliminary examination. The total number of certificated mental nurses on the staff now is 75.

Entertainments.—During the winter months, entertainments were provided at least twice weekly in the form of dances, cinematograph shows, concerts and theatrical performances. A large party of patients and staff was entertained at the Christmas Carnival at the Kelvin Hall, and Theatre Royal Pantomime, under the auspices of the Corporation of Glasgow. A large party of patients and staff enjoyed the Pantomime at the Princess Theatre on the kind invitation of the proprietor of this Theatre. Thanks are also due to the Milngavie Players, Glasgow Players, Gartloch Players, Lennox Castle Concert Party, and the Lewis Society Concert Party, for their performances, which were enjoyed by all.

JAMES H. MACDONALD,

Medical Superintendent.

WOODILEE MENTAL HOSPITAL, LENZIE.

Movement of Population.—On 31st December, 1938, the number of patients on the Register was 1,051 (576 males and 475 females) as compared with 1,063 (579 males and 484 females) at the end of the previous year. The average daily number of patients resident during the year was 569 males and 474 females, a total of 1,043. The total number of admissions during the year was 73 (38 males and 35 females) as compared with 88 (48 males and 40 females) during the previous year. The total number of discharges for the year was 32. Of this number 8 cases (2 males and 6 females) were discharged as recovered; 15 cases (10 males and 5 females) were discharged as relieved; 8 cases (4 males and 4 females) were transferred to other establishments, and 1 male patient was boarded-out. The deaths numbered 53 (24 males and 29 females) this being the lowest number of deaths recorded since 1893.

Principal Forms of Mental Disorder on Admission.—Schizophrenia was present in 20 cases (13 males and 7 females); mental deficiency plus psychosis in 9 cases (7 males and 2 females); manic depressive psychosis in 6 cases (2 males and 4 females); alcoholic insanity in 6 cases (6 males); epileptic insanity in 5 cases (3 males and 2 females); general paralytic dementia in 5 cases (4 males and 1 female); organic dementia in 7 cases (1 male and 6 females); senile dementia in 3 cases (2 males and 1 female); acute confusion in 5 cases (5 females).

Causes of Mental Disorder.—The outstanding probable factors, ascertained to be either predisposing or exciting causes of the mental breakdown in those admitted, were as follows:—Mental stress (including domestic or business worry, adverse circumstances and unemployment) in 19 cases; alcohol in 12 cases; syphilis in 7 cases; adolescence in 5 cases; previous attack in 4 cases; menopause in 4 cases.

General Health.—The general health of the patients and staff has been good. The Hospital has experienced no epidemic disease throughout the year.

Service Patients.—There were 38 Service patients in residence on 31st December, 1938, as compared with 39 Service patients last year, 1 having died. Of the 38 patients, 33 were paid for by the Ministry of Pensions, and 5 were paid for by the General Board of Control from a Special Exchequer Grant.

Patients' Entertainment.—During the winter months, entertainments were provided at least twice weekly in the form of dances, cinematograph shows and concerts. The three concert entertainments arranged by the Corporation were greatly appreciated by the patients. A large party of patients were entertained at the Christmas Carnival in the Kelvin Hall, at the Theatre Royal Pantomime, and at the Princess Theatre Pantomime. Thanks are also due to Miss M'Kellar for the splendid entertainment given by the children of her dancing school, to the Gartloch Hospital Dramatic Club for their excellent concert, and to our own staff for the excellent concert they gave on New Year's night. During the summer months charabanc drives to places of interest were enjoyed by the working patients. One drive went to Gifford where the party spent a most enjoyable day as the guests of Dr. and Mrs.

Carre (late Medical Superintendent, Woodilee). Small parties of patients were also taken to the Scottish Exhibition during the season.

Staff.—The following members of the staff retired on pension during the year ended 31st December, 1938:—

William Cunningham, labourer, after 20 years' service;
George Paton, electrician, after 37 years' service; and
Peter M'Kenzie, labourer, after 39 years' service.

The following members of the staff left during the year ended 31st December, 1938:—

Mr. William Bankier, farm manager, was transferred to Gartloch, on his appointment as farm manager for the three institutions, and Mr. William Gibson, was transferred from Hawkhead to Woodilee; and

Miss Margaret P. Cameron, assistant matron, left to take up a post in a London Hospital.

In each case their services to the hospital are acknowledged with appreciation.

Nursing Certificate.—At the examinations of the Royal Medico-Psychological Association held in May and November, 1938, 18 nurses and 3 attendants passed the Preliminary examination, and 9 nurses and 1 attendant the Final examination.

Works Department—Reception House and Sanatorium.—These buildings were started in June, and by the end of the year four wards, sanatorium and nurses' home had frame work up and roofing completed. It is expected that the buildings will be ready to receive patients in the Autumn of 1939. The rewiring of the Institution is nearing completion. Only the Nurses' Home and Imbecile Home have still to be done. A new sub-station for the Clyde Valley Electrical Power Company was erected in the grounds. Repair and redecoration of interior walls still proceed. The roadways round Male Division 5 and 6 were renewed. The extensions to the Nurses' Home are almost completed.

General.—The morale, discipline and efficiency of the staff has been maintained at a high standard.

JOHN R. ROBB,
Physician Superintendent.

STONEYETTS HOSPITAL, CHRYSTON.

Admissions, Discharges and Deaths.—On 31st December, 1938, the number of patients on the Register was 201, consisting of 101 males and 100 females; an increase of 25 males and 38 females over the previous year. The number of cases admitted during the year was 107 (47 males and 60 females), and the number of patients discharged recovered was 6 males and 6 females, and 3 males and 1 female unrecovered, 4 males and 1 female discharged to other Asylums, and 7 males and 10 females died during the year. This Hospital continues to fulfil its function as an Asylum for certified mental patients. The four Villas have been fully occupied during the year, a high proportion of the new admissions being seniles and chronic psychotics.

General Health.—The health of the patients and staff has been very good, and there was no occurrence of any epidemic disease.

Villas.—Each Villa functions as a small hospital unit by itself, and an attempt is being made to classify the patients in the separate Villas and wards. It is hoped to have an electric range and hot plate installed in the kitchen of each Villa. The addition of a bathroom and a verandah to each of the large wards is recommended.

Nurses' Home.—Complaints are still being made about the facilities obtainable in the temporary Nurses' Home which compares very unfavourably with the Nurses' Homes in other Hospitals.

Staff.—Mr. Hugh Gray, house steward, retired on account of ill-health after 29 years 9 months' service with the Local Authority. Mr. Maxwell M'Donald was appointed to fill the vacancy. In the May and November examinations of the R.M.P.A., 1 attendant passed the Final examination and 7 attendants and 5 nurses passed the Preliminary examination.

Entertainments.—The weekly Cinema Show continues to be the most popular form of entertainment for the patients, and excellent programmes were submitted. The three Concerts arranged by the Corporation were first class and greatly appreciated. The Concerts got up by the Nursing Staff and the Kitchen Staff respectively were keenly anticipated and greatly enjoyed by patients and staff.

Buildings.—The work in connection with the supply of lighting and power for the Hospital and Staff houses by the Clyde Valley Company is now practically completed. It is hoped that the kitchen and laundry equipments will now be brought up to modern standards. The Recreation Hall has been re-floored and re-decorated, and the result is a credit to the Works Department. A Post Office pillar box has been placed outside the North Gate for the use of the Staff and a telephone kiosk will be erected on the same site. Plans have been prepared for a small glass house, the erection of which will be completed in the coming year. This will ensure a supply of flowers and plants to the Wards and provide occupation for certain patients.

General.—I wish to record my appreciation of the work of all Members of the Staff who have co-operated so loyally to the smooth running of the Hospital.

ALEXANDER DICK,

Medical Superintendent.

LENNOX CASTLE CERTIFIED INSTITUTION.

The total number of patients on the Register shows an increase of 120 from last Report.

	Males.	Females.	Total.
On Register, 31st December, 1937 ...	508	480	988
Admissions	87	74	161
Discharges	14	12	26
Deaths	10	5	15
On Register, 31st December, 1938 ...	571	537	1,108

Admissions—

<i>From—</i>	Males.	Females.	Total.
Southern General Hospital	22	17	39
Eastern District Hospital	3	1	4
Stobhill Hospital	4	14	18
Waverley Park Certified Institution	—	6	6
Caldwell House Certified Institution	4	2	6
Barnhill Institution	2	4	6
Royal Scottish National Institution Larbert	21	10	31
Oakbank Hospital	—	1	1
Barlinnie Prison	7	—	7
Edinburgh Prison	—	1	1
St. Joseph's Certified Institution ...	3	—	3
St. Charles Certified Institution ...	2	3	5
Broadfield Certified Institution ...	—	5	5
Lennox Castle Certified Institution (re-certified)	1	—	1
Dalbeth Convent	—	1	1
Own Homes	18	9	27
	<hr/> 87	<hr/> 74	<hr/> 161

Discharges—

To other Institutions	2	6	8
To care of friends	5	5	10
Expiry of Certificate	7	1	8
	<hr/> 14	<hr/> 12	<hr/> 26

Low grade and partially helpless patients continued to be admitted in a higher proportion than was anticipated, and it is felt that even the opening of the Hospital Section will only relieve the ordinary Villas of those requiring constant attention by day and by night. The admission of many Section 10 cases from prisons since the Institution was opened has also involved the placing of extra work and responsibility on the shoulders of the Staff; almost one entire Male Villa has had to be reserved for those types. It is hoped that the opening of the new State Institution near Carstairs will relieve Certified Institutions from caring for such defectives, who while perhaps not always actively dangerous are unsuitable for treatment in Institutions where freedom from restraint must always be part of the general system. The Patients' Workshops and Occupational Therapy Departments have continued to produce a satisfactory output. Some of the work from both Male and Female Sections was exhibited in the Empire Exhibition.

Works Department.—The building of a new Lodge at the East entrance to the grounds has been proceeded with and this will eventually become the main entrance to the Institution. A new Tennis Court has been constructed for the use of Male Staff, and will be ready for play next season. The old Steam Engine in the Sawmill has been replaced by a Motor Engine, and it is expected that this will aid in overtaking the cutting of the enormous amount of fallen timber which still remains on the estate. The work of painting those Villas which only received coats of distemper after construction was commenced and the unoccupied Sections have now been completed.

General Health.—The general health of the patients and staff has been good. There was a moderate epidemic of influenza in the early months of the year, which affected both staff and patients. A slight outbreak of diphtheria occurred during February, 3 female patients and 2 male patients, having suffered from the disease, but all made a good recovery. This outbreak necessitated the opening of the Isolation Block for a period of two months.

Staff.—Although there was some increase in the number of Female nursing candidates for female nursing posts, the difficulty of obtaining a suitable selection remained. Many of those who are engaged show a lack of interest and throw up their posts for various petty reasons, also the approach of the first Examination for the Nursing Certificate is often the deciding factor in causing a young nurse to resign. However, there was a satisfactory enough entry for the May and November examinations of the Royal Medico-Psychological Association, and during the year 2 male nurses and 1 female nurse passed the Final examination, while 27 male nurses and 24 female nurses passed the Preliminary examination. The Senior members of the Staff received a course of lectures in Anti-Gas Precautions.

Entertainments.—These have been provided regularly and adequately. Visits to the Christmas Carnival in the Kelvin Hall and Pantomimes were arranged by the Public Health Department and were much enjoyed by those who were able to attend. The Weekly Dances and Cinema Shows were as usual patronised by all patients physically able to proceed to the Assembly Hall. The patients own Concert Parties, both male and female, apart from performing in Lennox Castle, also gave several entertainments at

other Institutions. Monthly Whist Drives and Dances were held for the Staff throughout the winter months. During the summer the Swimming Pool was patronised by all sections of the community. Football Matches were played regularly. The Bowling Green was opened for play for the first time in May, and several competitions for patients were carried through during the season. The Annual Sports were held on 3rd August, and were favoured with brilliant sunshine, but the day selected for the Swimming Gala was unfortunately wet and cold.

September Crisis.—During the crisis in September an S.O.S. was received from the Local A.R.P. Authorities for volunteers to assemble gas masks, and as many of the staff as could be spared worked for 12 hours completing 20,000 masks. Nine hundred and forty masks were allocated to the Institution.

Patients' Visitors.—It is gratifying to learn that the Corporation intend providing transport for visitors to the Female Section from Campsie Glen Station and Bus Stop. This will be very much appreciated by many of the elderly visitors who find the long uphill walk to the Female Section more than arduous.

C. G. A. CHISLETT,
Medical Superintendent.

CALDWELL HOUSE CERTIFIED INSTITUTION.

Admissions, Discharges and Deaths.—On 31st December, 1938, the number of patients was 99, an increase of 19 over the corresponding figure for last year. Thirty-seven patients (30 males and 7 females) were admitted during the year, of whom 34 were imbeciles and 3 feeble-minded. Most of these patients were admitted from their own homes, but 5 were transferred from other institutions. There were 9 deaths during the year, a moderate number considering the low powers of resistance usually associated with mental deficiency of the lower grades. Of the 9 patients discharged, 6 were transferred to Lennox Castle Certified Institution on attaining the age of 16 years, 2 were discharged to the care of their relatives, and 1 to the Royal Scottish National Institution, Larbert. That there were no escapes and no major accidents involving injury to the patients during 1938 reflects creditably on the care and attention given by the nursing staff.

Training and Occupation.—During the year classes have been established under the care of a senior nurse and two probationers, which have for their object the training of the children in muscular control and co-ordination, as well as in a sense of rhythm. Most of the children are quite incapable of benefiting from education as ordinarily understood, but this simpler form of training has met with a very gratifying measure of success, the children being much happier and brighter and their habits having greatly improved. Three of the boys are able to assist in the gardens, while three girls and three boys work in the wards. Altogether about 40 children have attended these classes.

Entertainments.—During the summer the children had frequent picnics to various fields on the estate and greatly enjoyed these outings. On 23rd December an entertainment was given by "The Kentucky Minstrels," followed by the usual Christmas tree which greatly delighted the children.

Throughout the year the general health of patients and staff has been good.

M. YOUNG,
Superintendent.

